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EVALUATION OF THE EFFECT OF PERCEPTION OF RISK MESSAGES ON OBSERVED SAFETY BELT USAGE

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16. Abstract

This study examined the effect of carefully developed safety belt messages on observed belt usage. Subjects were divided into six groups, including two control groups, with different groups receiving different messages and/or treatments. All subjects appeared for three different sessions. Questionnaires asking about attitudes and behaviors in relation to various health problems and practices were administered at all meetings, but the message was presented only at the second meeting. Between the second and third meetings, subjects made a number of telephone call-ins and heard their specific message repeated. One group experienced a delay between the end of the telephone call-ins and the final meeting. Observations were made of belt usage as subjects arrived at and left the meetings.

The overall findings were disappointing in that there was no observable effect of the messages on observed safety belt usage. Furthermore, there were no significant differences in observed belt usage as a function of age, race, or sex. Observed belt usage was associated with greater reported frequency of eye examinations but was not related to other reported health maintenance behaviors. "Saturation" of the message via telephone calls to listen to the message did not lead to increases in belt usage.

On the basis of this study it cannot be concluded that brief messages on the effects of safety belt usage and the risk of motor vehicle injury, combined with follow-up messages via telephone, lead to increases in observed belt usage.

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EXECUTIVE SUMMARY

Although it is well known that increased safety belt usage would lead to a signifcant decrease in motor vehicle injuries and deaths, actual belt usage remains very low. Most government sponored efforts still focus on voluntary rather than mandatory approaches. Part of this larger effort includes developing and testing public information materials.

This study examined the effect of carefully developed safety belt messages on observed belt usage. Subjects were divided into six groups. The first three each received one of three safety belt messages in audiovisual form. Group 4 received the same message as group 3 but in audio form only. Groups 5 and 6 received the same message, one on Heart and Exercise in audiovisual form. Groups 1 through 5 received an experimental questionnaire that asked about a variety of health-related attitudes and behaviors, including motor vehicle accidents and safety belt usage. Group 6 received a control questionnaire that substituted questions on blood pressure and stroke for the motor vehicle injury and safety belt questions, but all other quesions were the same as those on the experimental questionnaire.

All subjects appeared for three different sessions. At the first session the questionnaire was administered. At the second session the message was presented, followed by the questionnaire. At the third session only the questionnaire was administered. Between the second and third sessions each subject made a total of 15 telephone calls to listen to a pre-recorded audio version of the message appropriate to his group.

All subjects came for their last session in the week following their last telephone call-in except for those in group 2. These subjects experienced a two-week delay between the week of their last telephone call and their final meeting.

Observations were made of safety belt usage as subjects arrived for the sessions and again as they left. For participation in the study, subjects were given an incentive, namely, a gift they could select from a variety of merchandise or $25 in cash or a gift certificate from a local department store. In addition, for each meeting attended each subject was given a raffle ticket that made him eligible for prizes in a drawing conducted after the final meetings had been held. To be eligible for the grand prize, a subject had to have attended all meetings and complete all telephone call-ins. To be eligible for the lesser prizes, a subject still had to have completed all meetings and at least 12 of the 15 required telephone call-ins.

The overall findings were disappointing in that there was no observable effect of the messages on observed safety belt usage. In-depth analyses of the data were conducted to identify any possible relations or leads for further investigation.

There were some differences in the proportions of belt wearers according to age, sex, and race, but none of the differences was statistically significant.

When reported frequency of belt usage was related to reports of other health maintenance behaviors, there was a relationship to frequency of dental flossing, as well as a weaker relationship to frequency of eye examinations. Observed belt usage was also related to reported frequency of eye examinations, suggesting that the finding may be real. The relationship between reported belt usage and observed belt usage was extemely significant.

The group receiving the message in audio form only showed significantly less improvement than the group that received the same message in audiovisual form. However, the interpretation of this finding is problematical because the group receiving the particular message in audiovisual form was also significantly better than the other two message groups that received audiovisual presentations. It is possible that the particular message used (Physics) was much superior to the other two messages and that indeed the audiovisual presentation was more effect, but with the relatively small numbers of subjects in each group and the large number of statistical tests conducted, it may not be prudent to accept this interpretation without further investigation.

No differences were found between subjects experiencing a delay between their last call-in message and the final meeting and subjects whose last meeting was conducted immediately after the call-ins were completed. Thus there was no evidence of a delay either "consolidating" the impact of the message or contributing to a weakening of message effect. The additional contributions of the call-in messages were not related to any increment in observed belt usage. Thus it cannot be concluded that the additional exposure to the messages reinforced or strengthened the tendency to wear belts.

During the conduct of the study, a community safety belt program was instituted, with the initial launching occurring just three weeks prior to the first meeting sessions of this study and continuing throughout the duration of this project. Measures of awareness of the community safety belt project did not indicate that it influenced the basic findings of this study. However, the possibility cannot be ruled out that this other activity in some way affected the results of this project.

Subjects' reported judgments of the three major health problems in the U.S. today did not appear to be differentially affected by the various messages presented on safety belts, but the groups receiving safety belt messages showed a greater increase in the perception of accidents (but not necessarily motor vehicle) as a major health problem.

The basic findings are listed below:

1. There were no statistically significant differences in observed belt usage as a function of age, race, or sex.

2. Observed belt usage was associated with greater reported frequency of eye examinations but was not related to other reported health maintenance behaviors included in the questionnaire.

3. There were no significant relationships found between the safety belt messages and observed belt usage.

4. Although the comparison of the message effects of audiovisual presentation versus audio presentation were statistically significant, the finding was not considered valid because the particular audiovisual group in question showed significantly better results than the other audiovisual message groups in the study.

5. "Saturation" with the message via telephone calls to listen to the message did not lead to increases in belt usage.

6. There was no evidence that the Community Safety Belt Program affected the major findings of the study.

7. The groups receiving safety belt messages showed a greater increase in the proportion of subjects reporting accidents as a major health problem.

On the basis of this study it cannot be concluded that brief messages on the effects of safety belt usage and the risk of motor vehicle injury, combined with follow-up messages via telephone, lead to increases in observed belt usage.

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INTRODUCTION

There is overwhelming evidence that increased use of safety belts is by far the most cost effective measure available in highway safety today. Safety belts are installed in most seating positions in the vast majority of the vehicles on the highway today. Yet belt usage peaked at no more than 25 - 30 percent and has actually declined in recent years to a nationwide estimate of usage in the order of 12-15 percent. These conditions prevail in the face of evidence that the majority of people believe that seat belts save lives.

In recent years there has been a concerted effort to focus on the protection of infants and small children in car crashes. The groundswell of activity and concern that has been initiated in the United States probably represents the most significant public health movement to occur in this nation in decades. As of this writing, forty states and the District of Columbia have passed legislation relating to proper restraint of small children, and many more are introducing such legislation. While most state laws limit their occupant restraint requirements to infants and very young children, New York has enacted legislation that by 1987 will raise to ten the age below which occupant restraints are required. Business and industry are beginning to recognize their vested interests in encouraging protection of their employees and are implementing programs designed to increase belt usage. While the impact of these efforts has been far from complete, nevertheless the results must be considered strikingly successful for a voluntary approach. In one community wide effort observed usage rate has increased to over 40 percent (HSRC report, in preparation).

However, the fact remains that overall usage remains dismally low. Recent information from the United Kingdom (Ashton, Mackay, and Camm, 1983) shows that the enactment of a mandatory belt usage law increased usage from between 30 and 40 percent to 95 percent or higher. If we persist in the voluntary approach, much more must be known about how to motivate people to protect themselves from the risk of motor vehicle injury. One way to bring about such a change is to modify the perception of risk of motor vehicle injury.

This study was undertaken to investigate whether messages carefully designed to influence safety belt attitudes and behavior could bring about changes in reported safety belt attitudes and observed safety belt usage. The experimental messages used communicated messages that attempted to influence risk of perception of motor vehicle injury and provide information concerning effectiveness of safety belts in reducing risk. The study attempted to include a broad range of subjects rather than focus on college students. It also investigated the relationship between observed belt usage and subject age, race, and sex; mode of message presentation; reported beliefs and practices concerning other health problems and health-related behavior, as well as other variables described in more detail below.

The perception of risk messages used in this project were developed under a separate NHTSA contract conducted by Perceptronics. The

development of the messages is described in their reports (Slovic, Lichtenstein, MacGregor, Fischhoff, and Schwalm, 1983; Schwalm, and Slovic, 1983).

To accomplish the above objectives, subjects were recruited from the community and scheduled for three sessions at a specified project location. Between the second and third session subjects were required to make a total of 15 telephone calls to listen to a pre-recorded message. Different subject groups received different messages and in some cases different calling schedules. In all, there was a total of six different groups varying by message, mode of message presentation, and delay between final message and final session. The details of the procedures are described below.

METHOD

Experimental Design

The final experimental design used included six groups, four of which were exposed to the experimental message and two to the control message. In addition, each group received an experimental or control questionnaire. Appendix 1 describes the messages used. Specifically:

Group 1 received an audiovisual message on Relative Risk and the experimental questionnaire.

Group 2 received an audiovisual message on One-Third Probability Plus Alcohol Plus Control and the experimental questionnaire.

Group 3 received an audiovisual message on Physics of Crash Plus Alcohol Plus Control and the experimental questionnaire.

Group 4 received an audio message on Physics of Crash Plus Alcohol Plus Control and the experimental questionnaire

Group 5 received an audiovisual message on Heart and Exercise and the experimental questionnaire.

Group 6 received an audiovisual message on Heart and Exercise and the control questionnaire.

The experimental questionnaire include questions about habits and attitudes concerning a number of health problems, including motor vehicle injuries and safety belt usage. The control questionnaire was identical except that it substituted questions concerning stroke for the safety belt questions.

Because of the small number of subjects responding to the various solicitation efforts, these six groups were compiled from the original 11 group design (Appendix 2). It was felt that the modified groupings would allow us to address the major questions with sufficient numbers (preferably about 40 subjects per group) in order to arrive at valid conclusions. Because of the reduction in number of groups, it was necessary to eliminate certain design issues, e.g., the efficacy of a parking attendant versus a van to collect belt usage data. Nevertheless, if the original 11 groups had been retained, there would not have been enough subjects in each group to address adequately any of the original questions.

Using the modified experimental design, the following hypotheses were addressed:

1. There is no relationship between the demographic characteristics of subjects and the relationships between safety belt usage and message presentation.

Belt usage rates of the different demographic groups were examined. In addition, changes in belt use were examined in relation to age, race, and sex.

2. There are no relationships between safety belt use and other health maintenance activities. Since both experimental and control questionnaires contained questions on other health-related matters such as eye examinations, dental hygiene, exercise, diet, and smoking, comparisons were made of belt usage attitudes and behaviors with responses to these other questionnaire items for all groups.

3. There is no message effect, that is, none of the three safety belt messages tested has an influence on subjects' belt wearing behavior or perceived risk of motor vehicle injury. This hypothesis was investigated by making comparisons among the four experimental groups and the two control groups, with special focus on those subjects who were not belted when they came in for their first meeting. In addition, comparisons were made between Groups 5 and 6 to determine whether questions concerning safety belts influence subsequent safety belt usage. Groups 5 and 6 received the identical message on Heart and Exercise, but differed on the questionnaire received.

4. The manner (audio or audiovisual) of message presentation has no effect on safety belt usage. The results of Group 3 were compared to those of Group 4 to address this hypothesis, since both groups received the same message (Physics) but in two different forms.

5. Observed belt usage is not modified as a function of time following last telephone message. The original 11-group design provided a better method of assessing the effect of delay the the modified design. Ideally, to measure the effect of delay unambiguously, there would be two identical message groups, one group attending the third meeting immediately after they finished their call-ins and the other group delaying their third meeting until two weeks after their last call-in. However, since this was not possible with the modified design, on message group, namely, Group 2, was dedicated to the delay question. Group 2 was compared to Groups 1, 3, and 4 on the basis of changes in belt usage rates between the outgoing belt usage at the second meeting and the outgoing belt usage at the third meeting. More, specifically, this analysis was restricted to those subjects who were not belted upon leaving the second meeting.

6. Saturation with the message does not produce any effect

above and beyond that obtained after the initial message presentation. Saturation was achieved by requiring subjects to call in to listen to a pre-recorded message five times a week for three weeks after the second meeting. Consequently, the effect of saturation for Groups 1, 3 and 4 was measured by comparing the outgoing belt usage of the second meeting with the incoming belt usage of the third meeting. For Group 2, that measure represented the effects of saturation and delay.

7. There is no influence on the study of the Community Safety Belt Project to encourage safety belt usage. Just prior to the first subject meeting in the present project, a major community wide program was launched to promote safety belt usage. The program included an extensive safety belt promotional campaign that used various type of incentives. To determine the effects of the community campaign on the results of this study, a question was included on each of the questionnaires asking about other health or safety messages heard in the previous week. This hypothesis was included to determine the number of subjects who knew about the community's safety belt incentive campaign so such comparisons could be made of belt usage by the knowledgeable subjects versus the naive subjects.
8. Participation in the study, including exposure to questions and messages concerning motor vehicle injuries, does not increase the perception of motor vehicle accidents as a health problem.

Subjects

Recruitment. Various efforts were undertaken to solicit subjects for participation in the study. Initially, subjects were solicited through their organizational affiliation, e.g., the North Carolina State Employees Association (through an announcement in their newsletter), local churches (both white and nonwhite), and the Retired Senior Volunteer Program (RSVP). These groups were chosen to provide a diverse population from which subjects could be recruited. However, insufficient responses were obtained from these organizations. As a result, additional recruitment efforts were undertaken. Flyers were distributed in town parking lots, and notices were posted around the Chapel Hill Community and in Hillsborough (in laudromats, banks, shops, courthouse, churches, around the University campus and other public places) to encourage participation. In addition, advertisements (including a large display ad purchased in a free semi-weekly newspaper) were placed in three local newspapers (The Daily Tarheel, the Chapel Hill Newspaper and the Village Advocate). Finally, special flyers were sent out to box holders of the three rural routes in the general vicinity of where the project was being conducted. With such extensive distribution and advertising efforts, 435 people responded by calling in for further information. However, almost 40 percent (172) of them dropped out prior to the first meeting. Reasons for dropping out were mostly because subjects were leaving town at the end of the school year (Table 1) or were unable to

Table 1. Summary of Subjects at the Different Stages of the Study.

Subjects responded to flyers and ads		435
No shows for the first meeting		172
No answer	40 (23.3%)	
Left town	57 (33.1%)	
Disconnected phone	26 (15.1%)	
No Transportation	7 (4.1%)	
Cancel by subject	36 (20.9%)	
Miscellaneous	6 (3.5%)	
No shows for the second meeting		8
Drop outs for the phone calls		2
No shows for the third meeting		5
Subjects who completed all phases of the study		248
Subjects who took the wrong questionnaire at the first meeting*		14
Subjects with records usable to the study**		234

* Removed from the analysis file
** Included those who came on bicycles, motorcycles, or walk-ins.

stay in town long enough to attend all three meetings. As a result, only 263 subjects agreed to participate in the study. Of these, 248 eventually completed.

Procedures for Scheduling Subjects. A special telephone line was set up to receive calls from subjects. The receptionist answered the call with "Health Research Study" and then obtained the following information from the caller: name, home telephone number, work telephone number, best hours to call, mailing address and how the subject heard about the project (Appendix 3). The caller was then told that a project staff member would call back soon to provide more information about the project and to set up appointments.

As calls came in, subjects were grouped according to how they had heard about the project. Within each such source group, they were randomly assigned to one of the original 11 treatment groups. However, the random assignment procedures were modified later because of differential drop out rates among the 11 groups. Thus, the later callers were assigned to groups by a weighted scheme, that is, groups with a higher dropout rate were assigned more people in order to keep the groups comparable in size. In addition, husbands and wives, family members, friends or co-workers were assigned to different groups. This was necessary to discourage outside discussion of the project during the duration of the study and to minimize carpooling. Carpooling tended to create a more demanding situation for obtaining belt usage information.

Once a subject was assigned to a group, efforts were made to contact the subject again to schedule the three meeting appointments. At the same time, subjects were informed of their necessary commitments to the study in return for a small appreciation gift. Ordinarily, meetings for the same group were scheduled during the same week, but subjects could usually pick a time within the week to accomodate their own schedules. Appointments were made on almost any day (even on legal holidays and on weekends, if necessary) from 7:00 in the morning to 6:00 in the evening. Following the phone call, a form confirming appointment dates and a map to the meeting site were sent to the subject (Appendix 4).

Efforts to contact subjects occurred continuously for several months of the study. At times, many calls were needed to locate a subject (40 subjects were "lost" because no contact could be made with them after numerous attempts). Additional calls were made to handle appointment changes and to remind subjects to make up their missed appointments or call-ins. In large part because of the continual monitoring of subjects' attendance, all but 15 of the subjects who came for the first meeting completed all phases of the study, representing almost a 95 percent completion rate for those that started in the study.

Incentives

Subjects were motivated to participate in the study by various methods. First, upon completion of the study, subjects were awarded with $25 cash or gift certificate, or an item of their choice from a pre-selected list of merchandise. Arrangements were made with a local department store for obtaining a variety of merchandise for a discounted

price. All items (Appendix 5) offered by the store retailed for more than the bulk order price of $25 (several retailed for as much as $35). Samples of items were displayed during the first and second meetings, and subjects were requested to indicate their preference by the end of the second meeting. In this way, the desired number of each item could be obtained and the problem of having too few of any one selection could be avoided. Also, by offering a variety of items, there was something appropriate for almost every person in our diverse subject population. Upon completing the call-ins and the third meeting, a specially printed and sequentially numbered gift coupon was presented to the subjects for them to redeem the items of their choice at the participating department store.

In addition to the above, a two-tiered lottery system was set up to encourage subjects' continued participation. Each time they attended a meeting, they were given a raffle ticket that provided a chance to win extra gift certificates. The more meetings attended (up to three), the greater was the chance of winning something. As long as they completed 12 of the required call-ins, they could be included in the drawing for the gift certificates. Those that completed all three meetings and the entire 15 call-ins were included in the drawing for the grand prize, a microwave oven. The system was explained to subjects at the beginning of the study, so that they would know what they were required to do in order to be eligibile to participate.

Twenty-four prizes were given in the drawing, including one microwave oven, three $30 gift certificates, eight $20 gift certificates and twelve $10 gift certificates. Since there were 243 subjects completing the study, each subject had about one in ten chances of winning something in addition to the $25 cash or gift. If a subject's name was drawn more than once, only the largest prize was awarded, so that no subject could receive more than one extra prize. The drawing of raffle tickets was conducted on July 15. Once the winners were notified, the list of winners was recorded on a telephone line and all subjects could call in to find out the results of the drawing. All subjects had previously been given the number to call for this information.

Considerable effort was made to insure that the subjects would find the sessions enjoyable. Soft music played in the background, and during the message sessions when it was necessary for some subjects to wait, magazines were provided for browsing. In addition, for all three sessions as subjects left the Community Center, each person in the car was given a package of toasted almonds, donated by Piedmont Airlines, and thanked for participating. This procedure also required that cars stop at the parking booth when exiting, thus facilitating the observation of belt usage.

Meeting Site

The Homestead Community Center was chosen as a meeting site because it met several important criteria. First, it is located about five miles out of town and has no local bus service so that it was highly likely that subjects would have to drive. Second, it is within reasonable commuting distance from the three surrounding communities: Chapel Hill, Hillsborough and Durham. Third, there is ample free parking space available. Fourth, it was possible to arrange to control entrance and egress. To accomplish

this, a sturdy parking booth of stainless steel construction, cones, and ropes (Appendix 6) were placed on the driveway outside the building to control entrance and exit of vehicles. Signs were installed on both sides of the drive to direct subjects into the Community Center's driveway. Fifth, there was adequate space in the building, including the possibility of having a waiting room, a testing room, and a message room. In addition, bathroom facilities were available.

The Community Center proved adequate on all these points. Most subjects arrived by car or pickup truck, although a few came by motorcycle or bicycle. The control of vehicles' entrance and exit enabled observation of belt usage in all vehicles. These observations were further enhanced by the "parking attendant's " signal for subjects to stop momentarily alongside the parking booth either for checking in (upon arriving) or for receiving a package of toasted almonds and turning in their raffle ticket (upon leaving).

Inside the building there were one large room, a kitchen, and a small entrance room. Drapes were installed to cover up the windows. Tables and chairs were set up in the large room where at times as many as seven or eight subjects at a time completed questionnaires. Additional space was used by children accompanying parents who were serving as subjects. Paper and colored pens were supplied to children to help keep them occupied. Smaller children and infants were held by project personnel while parents participated in the study. The kitchen was modified for presenting the messages in the second session. It was the darkest room in the building, and the audiovisual equipment could easiily be set up on the counter.

Questionnaires

At each of the three meetings, subjects were asked to complete a 19-item questionnaire. The purpose of the questionnaires was to determine the subject's perception of accident/injury risk and to obtain information on his or her belt usage habits. Other questions asked about other types of health-related behaviors such as smoking, exercise, diet, dental habits, and eye examinations. Including these other questions enabled a comparison of belt usage behavior with other types of health maintenance behaviors (Appendix 7). Furthermore, it enabled the collection of belt usage information in a less obtrusive manner.

Two different types of questionnaire were used. Control questionnaires differed from the experimental questionnaires in the following manner: instead of having safety belt questions, they contained questions on stroke and blood pressure. The questionnaires for the three meetings (Forms 1, 2 and 3 for the Experimental Groups and Forms 4, 5 and 6 for the Control Group) were essentially identical except that for the second meeting there was an additional question (#10) that asked about the subjects' reactions to the message just presented. Having all other questions the same from the first through the third meetings provided measures of change (especially for the safety belt and risk perception questions) as a result of being presented with the messages.

Another question asked about health or safety related messages heard by the subject in the last week prior to completing the questionnaire.

This question was included in an attempt to detect the effect, if any, of an undertaking that coincided with this project. A community safety belt incentive program was initiated three weeks prior to the first session meetings in this project and continued throughout this project's duration.

The last question on the questionnaire asked for the subject's opinion as to the three most important health problems in the United States. The objective here was to determine how often subjects view motor vehicle accidents as an important health problem, and whether their opinion changed after viewing/hearing the messages.

The six different forms of the questionnaire were specially coded and produced in three different colors (one for each meeting) so that the proper questionnaire could be given to the right subjects at the appropriate time.
However, as will be noted later, even with such careful precautions, some subjects were administered an incorrect questionnaire.

Data Collection

The First Session. The first series of meetings were conducted during the second and third weeks of May. The purpose of the first session was to describe to subjects in detail the reason for the study (to evaluate different types of health and safety messages), to explain the requirements for their participation in return for a small gift and chances to participate in the lottery, and to obtain baseline measures of their risk perception and belt usage. They were then given a questionnaire to complete. Following completion of the questionnaire, subjects were asked to examine the display of gifts and be prepared to state their selections at the next meeting. If they were already decided, they could sign up immediately. Prior to their leaving, they were asked to fill in their names and addresses on the raffle ticket stub and turn it in to the parking attendant on their way out. They were also admonished to discuss the study with no one else until after the last session.

An unobtrusive method was used for observing and recording subjects' belt usage. As subjects drove up the driveway, the parking attendant stopped them to check them in and, at the same time, noted their belt usage. As subjects drove out, the parking attendant took their raffle ticket, handed them a package of toasted almonds, thanked them for coming and again noted their belt usage.

A special check-in list (Appendix 8) was used by the parking attendant for recording the incoming belt usage observations. Subjects' names were written on this list, together with the times they were scheduled to appear. Next to each subject's name were four boxes for coding the belt usage information. DB stands for Driver Belted, and DN stands for Driver Not Belted. The other two categories were reserved for passengers only: Passenger Belted (PB) and Passenger Not Belted (PN). The coding scheme used made no differentiation on passengers by their seat position. Although this information would have been helpful, obtaining it would have placed an extra burden on an already demanding observation and coding task.

Usually, appointments were scheduled on the hour with as many as seven

or eight appointments scheduled for the same time. The parking attendant was the only person outside to check people in and out and to observe and code belt usage. Outgoing belt usage was classified initially by placing the ticket stub in one of four compartments in a box inside the parking booth. The compartments were labelled DB, DN, PB and PN, corresponding to the categories described earlier. At the first convenient break, the appropriate label was placed on the back of each stub.

In addition to checking subjects in and out, the parking lot attendant made note of no-shows and communicated this information as soon as possible to the research personnel inside the building. As soon as possible an attempt was made to contact each no-show and reschedule the subject at the earliest convenience.

The Second Session. During the last two weeks of May the messages were presented to the subjects. As subjects arrived, the parking lot attendant gave each one a card that showed their name, group number, and color code. The attendant then directed the subjects to a front room where they were to wait until the project staff came for them. As soon as possible, a project staff member greeted them and brought them into the room (kitchen) where the audiovisual equipment was set up. By noting the group number, as well as the color code, on the subject's card, the project staff member then presented the appropriate message. Subjects in the same group arriving at the same time were presented with the message simultaneously. The message on Relative Risk was presented to Group 1. The message on One-Third Probability (plus Alcohol plus Control) was presented to Group 2. The message on Physics of Crash (plus Alcohol plus Control) was presented to Groups 3 and 4 with Group 4 receiving only the audio version. Finally, Groups 5 and 6 were presented the message on Heart and Exercise, obtained from the American Heart Association.

At the end of the message, subjects were given the questionnaire and the raffle ticket and asked to complete them before leaving. After completing the questionnaires, they were again asked to look at the gift display and note their choice on a tablet available for that purpose. Printed information regarding the required telephone calls was given to subjects at this time. These information sheets were color coded by Group Number and the telephone numbers given had been selected for easy recall. For example, the number for the groups receiving the Heart and Exercise message was 962-4278, or 962-HART (see Appendix 9). The procedures for collecting incoming and outgoing belt usage information described previously were used in this session as well.

Telephone Call-ins. Most of June was reserved for subjects making their telephone call-ins to hear the pre-recorded message. As a participation requirement, each subject was to call in and listen to the message five times a week for three weeks. The grand prize lottery was only for those who called in all 15 times to participate. Calls could be made any time of the day or night. However, each call had to be made on a separate day in order to count, that is, a subject could not make five calls in one day and have them count as five out of the 15 required calls. Since only five call-ins were required for each week, subjects could miss one or two call-ins during the week and still make it up during the weekends. Arrangements were also made to receive collect calls from out of

town to accomodate subjects on vacation or otherwise away. Subjects called from as far away as California to meet the study requirements.

The call-ins were continuously monitored by the project staff, and reminder phone calls were made if subjects fell behind schedule or called in on the wrong line. Thus, all kinds of efforts were undertaken to help subjects meet the project requirements. Furthermore, the promised gift was granted as long as subjects called in only 12 out of the required 15 times although these subjects were not eligible for the grand prize in the drawing. Because of the above efforts, only a small proportion (5%) of subjects failed to complete the study.

Special telephone equipment was purchased for handling the messages as well as the instructions that preceded and followed the message. Subjects called in through their designated telephone line (one telephone line for each message, with the telephone number given to subjects in a handout at the end of the second meeting), listened to the message, and then left their name and date of calling. All telephone lines were checked each day. Data tapes were removed from the telephone machines and the data were transcribed onto hard copy forms by two persons, each working independently from the other. This method of coding the telephone data provided a reliability check on the coding. Discrepancies identified were then checked against the telephone tapes again. Enough tapes were purchased so that all telephone data could be preserved until the end of project. In this way, questions arising about the number of times a subject had called in were easily checked against the original data on the tapes which contained a record of subjects' names and call-in dates.

The Third Session. Except for Group 2, subjects in all groups were asked to come in for their third meetings the week immediately following their last call-in. Subjects in Group 2 were scheduled to come in during the third week after their last call-in. Consequently, it took three weeks (from June 20 to July 8) to bring all subjects in for their third meetings.

At this last meeting, belt usage information was obtained using the procedures described above. When subjects first arrived, they were asked the number of times they had called in. This reported number was checked against the hard copy record. Of all those (255) that attended the second meeting, only two subjects did not complete the required 12 call-ins.

As before, subjects were asked to complete the questionnaires and the raffle tickets. Upon completion, they were given the gift of their choice. For those electing cash, a check of $25 was given. Gift coupons were prepared ahead of time and given to those electing a merchandise gift or the store's gift certificate. These gift coupons were sequentially numbered and made tamper proof (printed in green ink over white paper) and each was signed personally by a project staff member. Receipts for the gift coupons or checks were obtained from all subjects. All these measures were taken so as to account for the distribution of gifts. Subject's name and the choice of gift were written on the face of each gift coupon. They were then instructed to take the gift coupons down to the participating department store to redeem the gift of their choice.

Upon departure, subjects were thanked for their participation and an

information hand out (Appendix 10) explaining the upcoming lottery was provided to them. Because there was still a need to observe their outgoing belt usage for this meeting, it was not possible to reveal the real purpose of the study to subjects at this time. Instead, subjects were told that they would be sent a short summary of the study after the study report is finished.

Data Editing and Creation of Analysis File

During the period when meetings were conducted, the belt usage information (from check-in list and raffle ticket) were added to the questionnaire data at the end of each day. Such a procedure was used so that merging of the questionnaire and behavior data could be accomplished with relative ease. Furthermore, it simplified the merging of the first, second, and third meeting data because it involved matching of three instead of nine sources of data. During the period of data collection, data were also being entered onto the Apple IIe computer for creation of an analysis file. A total of 248 sets of questionnaires were entered and matched, collating data for first, second, and third meetings. However, 14 subjects were administered an incorrect questionnaire, usually experimental subjects taking control questionnaires, at the first meeting. Thus, for these 14 subjects, there were no baseline measures on their risk perception and seat belt attitudes. For this reason, they were removed from all subsequent analysis leaving only 234 subjects' data in the analysis file. In addition, subjects took the wrong questionnaires (also with experimental subjects taking control questionnaires) during the second meeting. These subjects were retained in the analysis file but a special flag was put on their record. Their data could be used for most analyses. No special effort was made to remove them fom the remaining analyses because the lack of significant findings elsewhere suggested it would not be worthwhile to re-analyze the data eliminating these subjects.

RESULTS AND DISCUSSION

Overall Belt Usage Rates

Baseline belt usage rates (Inbelt 1) vary widely among the six message groups, from a low of 30 percent for the Relative Risk Group to a high of 57 percent for the group receiving the message on Physics of Crash (Table 2). Except for Group 5, all message groups showed a steady increase in belt usage from the first through the third meetings. However, this increase probably could not be attributed to the safety belt message heard because a control group (6) also showed a similar amount of increase. Statistical tests comparing the above results are reported in a later section of the report, and more detailed information can be found in Appendix 11. However, because of small N's and large variances, many absolute differences were not statistically significant.

Belt Usage Rates by Demographic Groups

Belt Usage by Race. Higher belt usage rates were observed for the white drivers for all three meetings (Table 3). A higher proportion of nonwhite drivers was found to be using belts at the third meeting as compared to the first meeting, and this increase was comparable to that observed for the white drivers. However, because of the lower initial usage rates of the nonwhite drivers, this change represented a larger amount of proportional increase for them, that is, almost a 50 percent increase for the nonwhite drivers as compared to a 32 percent increase for the white drivers. Nevertheless, neither the original observations of belt usage nor the changes in usage showed significant differences by race.

Table 3. Belt Usage by Race

	WHITE	NONWHITE
Inbelt 1	42.5%	28.0%
Outbelt 1	43.3%	28.0%
Inbelt 2	50.0%	40.0%
Outbelt 2	52.8%	40.0%
Inbelt 3	55.5%	44.0%
Outbelt 3	56.0%	41.7%
TOTAL N (At Inbelt 1)	201	25

Belt Usage by Sex. Females were found to have a higher initial belt usage rates but by the time they left the third meeting, the belt usage rates were very similar for both male and female subjects (Table 4). Thus, male subjects showed a higher proportional increase in belt usage than their female counterparts. However, neither the original observations of

Table 2. Belt Usage Rates by Groups (Percent)

TRIP	GROUP 1 Relative Risk	2 1/3 Alcohol + Control	3 Physics,Alc., Control	4 Physics,Alc., Cont.,Audio	5 Heart, Belt ?	6 Heart, Control
Inbelt 1	30.0	52.6	57.5	33.3	40.0	31.8
Outbelt 1	27.5	57.9	60.0	36.4	40.0	29.5
Inbelt 2	38.5	55.3	65.0	42.4	57.1	39.5
Outbelt 2	41.0	65.8	65.0	51.5	54.3	34.9
Inbelt 3	48.7	62.2	69.2	45.5	48.5	50.0
Outbelt 3	46.2	64.9	69.2	54.5	42.4	47.6

belt usage nor the change in belt use were statistically significant by sex.

Table 4. Belt Usage by Sex

	MALE	FEMALE
Inbelt 1	35.2%	42.7%
Outbelt 1	35.2%	43.6%
Inbelt 2	47.2%	49.4%
Outbelt 2	43.4%	53.8%
Inbelt 3	47.2%	56.4%
Outbelt 3	54.7%	54.4%
TOTAL N (at Inbelt 1)	54	172

Belt Usage by Age. The belt usage data by age are quite consistent across the six observation points. Subjects in the middle category (26-35) showed the highest belt usage rates, followed by subjects who were age 36 or above (Table 5). Younger subjects were found to be using belts less often than the other two age groups as they showed up for the meetings. However in terms of net change (Inbelt 3 - Inbelt 1), younger and older drivers showed a greater amount of change than drivers in the middle age category. Nevertheless, none of the observed age differences between or within age groups was found to be statistically significant.

Table 5. Belt Usage by Age

	AGES 18-25	AGES 26-35	AGES 36 AND OVER
Inbelt 1	34.3%	49.4%	37.0%
Outbelt 1	31.3%	51.2%	39.7%
Inbelt 2	42.4%	55.8%	46.6%
Outbelt 2	43.9%	60.5%	47.2%
Inbelt 3	51.5%	55.8%	54.8%
Outbelt 3	53.0%	62.4%	46.6%
TOTAL N (At Inbelt 1)	67	85	73

Belt Usage by Other Health Maintenance Behaviors

The questionnaires used included questions about a variety of health maintenance behaviors. The actual observed safety belt usage upon arrival

at the first meeting was related to the responses to questions concerning other health-related activities. There were no significant relationships found between observed belt usage and reported frequency of physical checkups, smoking behavior, frequency of exercise, or frequency of dental examinations. There was a significant relationship ($p < .03$) between observed belt usage and reported frequency of dental flossing, with belt users more likely to report frequent flossing. There was a weaker relationship ($p < .10$) found between observed belt usage and reported frequency of eye examinations. The tables for these findings, as well as others, may be found in Appendix 11.

Subjects' responses to the questions about belt usage were compared with other reported health maintenance behaviors. The only significant relationship found was between reported belt use and reported frequency of eye examination ($p < .005$). In addition, observed belt usage was compared with reported belt usage, and the relationship was highly significant ($p < .0001$), with persons who were observed to be wearing a belt much more likely to report frequent usage. Tables for these findings are also in Appendix 11.

Effect of Message

The effect of message was investigated based on each subject's safety belt wearing status when driving in for the third meeting (Inbelt 3) as contrasted with his status when driving in for the first meeting (Inbelt 1). This comparison maximized the possibility of detecting any effect, since by the third meetings subjects had had exposure to the message from both the second meeting and the telephone call-ins. More specifically, these analyses were restricted to subjects who were not wearing safety belts when they appeared for their first meeting. The response variable was, thus, belt wearing status (yes or no) on the third inbound trip.

An examination of whether age, race, or sex was related to change in belt usage by treatment groups showed no significant results (see III in listing of crosstabs in Appendix 11). Moreover, the χ^2 statistic for testing association between the response variable (Inbelt 3) and Group was likewise nonsignificant. Nonetheless, some simple categorical data models were fit to the Group by response frequencies to further characterize the variation in belt wearing rates by Group. The Group by response frequencies are shown in the following table (restricted to subjects who were not belted at the time of the first observation, Inbelt 1).

Table 6. Belt Status by Group (Inbelt 3)

GROUP	B	N	TOTAL
1	9	18	27
2	7	11	18
3	9	8	17
4	4	18	22
5	4	16	20
6	8	21	29

From this table a vector of the proportion of belted subjects by Group was computed and is given by:

$$P' = (.333 \quad .389 \quad .529 \quad .182 \quad .200 \quad .276)$$

To this vector is fit a model of the form:

$$\hat{P} = X\hat{B},$$

where X is a design matrix, $\hat{B}$ is a vector of model coefficients estimated by a generalized least squares procedure, and $\hat{P}$ is an estimator of P. In order to test some of the hypotheses of interest, the design matrix

$$X = \begin{bmatrix} 1 & 0 & 0 & 0 & 0 \\ 1 & 0 & 0 & 0 & 0 \\ 1 & 1 & 0 & 0 & 0 \\ 1 & 0 & 1 & 0 & 0 \\ 1 & 0 & 0 & 1 & 0 \\ 1 & 0 & 0 & 0 & 1 \end{bmatrix}$$

was chosen. In this model $\hat{P} = X\hat{B}$,

Where $B' = (b_1 \quad b_2 \quad b_3 \quad b_4 \quad b_5 \quad b_6)$

the first component b represents a weighted average belt wearing rate for Groups 1 and 2, since these two variables showed virtually the same proportions. The other components b_2, b_3, b_4, b_5 represent special effects for Groups 3-6, respectively, which either add to or subtract from the "baseline" (Groups 1 and 2) rate. Estimates of these effects are:

$$\begin{aligned} \hat{b}_1 &= .355 \\ \hat{b}_2 &= .175 \\ \hat{b}_3 &= -.173 \\ \hat{b}_4 &= -.155 \\ \hat{b}_5 &= -.079 \end{aligned}$$

This model fits the data quite well (as would be expected since only one degree of freedom is left). One hypothesis of interest involved a comparison of the belt usage rates for Groups 3 and 4 (represented by b_2 and b_3).

This hypothesis was tested by testing

$$H : b_2 = b_3 .$$

The χ^2 test of this hypothesis resulted in

$$\chi_1^2 = 5.64 \qquad p = .0175,$$

so the rates for these two groups differ significantly. Other hypotheses of interest involve testing whether the control groups (Groups 5 and 6, indicated by b_4 and b_5 in the model, since Groups 1 and 2 are combined) differ significantly from the experimental groups. From the model shown

above, the special effects b_4 , and b_5 did not differ significantly from zero, and moreover, the last three effects (for Groups 4-6) could simultaneously be omitted from the model without significantly increasing the χ^2 due to error.

To more specifically compare the experimental and control groups a second model was fit to the data with

$$X = \begin{bmatrix} 1 & 0 & 0 \\ 1 & 0 & 0 \\ 1 & 0 & 0 \\ 1 & 0 & 0 \\ 1 & 1 & 0 \\ 1 & 0 & 1 \end{bmatrix}$$

This model compares the belt wearing rates for Groups 5 and 6 with a weighted average rate for Groups 1-4. Neither of these groups differs significantly from the experimental groups.

Finally a model with

$$X = \begin{bmatrix} 1 & 0 \\ 1 & 0 \\ 1 & 1 \\ 1 & 0 \\ 1 & 0 \\ 1 & 0 \end{bmatrix}$$

was fit to the data. This model contains a weighted average rate for Groups 1, 2, 4, 5 and 6 and a special effect for Group 3. This model fits the data very well

$$\chi^2_4 = 3.30 \qquad p = .51$$

and the special effect for Group 3 is significant (p=.037). In fact, the χ^2 due to error is so small that there can be no other one degree of freedom effect included in the model that would be significant at a .05 level of significance.

Nonetheless, special effects for Group 5 and for Group 6 were added to the model so that the hypothesis of equal effects for these groups could be tested. This procedure was to test whether or not the fact that Group 5 subjects took the safety belt questionnaire made a significant difference in changing their safety belt usage rates. The difference between these two effects was not statistically significant (p = .53).

In summary, these models show that the belt wearing rates for the control groups (presented with Heart and Exercise message) do not differ significantly from the average rate for the experimental groups (presented with the safety belt messages). Group 3 (presented with an audiovisual message on Physics of Crash) does have a significantly higher rate than the overall average for the other groups, and in particular the rate for Group 3 is significantly greater than the rate for Group 4 who were presented

with the same message on Physics of Crash but in an audio form only. This last analysis is discussed further below.

Audiovisual Versus Audio Presentation.

Group 3 received the Physics Plus Alcohol Plus Control message in audiovisual form, while Group 4 received the same message but in audio form only. As indicated in the section on Message Effect, the comparison betwen these two groups indicated that the audiovisual group increased significantly more in safety belt usage than did the audio only group. However, it is may not be valid to conclude that the audiovisual presentation is significantly superior to the audio presentation alone, since Group 3 appeared aberrant in its behavior and was significantly better than either of the other message groups. While it may be the case that the Physics message is vastly superior to the other two messages, the apparent similarity of content among the three messages suggests that the difference observed may not be attributable to the differences in the form of message presentation. The form of message presentation (audio versus audiovisual) should be investigated further, using a Physics message in comparison to other messages before conclusions are drawn.

The Effect of Delay

In order to investigate the effect of delay, the subjects' belt wearing status on leaving from the third meeting (Outbelt 3) was compared with that on leaving from the second meeting (Outbelt 2). More specifically, the analysis was restricted to those subjects who were not belted on leaving the second meeting and the response variable was taken as the belt status when leaving the third meeting. Group by response frequencies are shown in the following table:

Table 7. Belt Status by Group (Outbelt 3)

GROUP	B	N	TOTAL
1	4	19	23
2	2	10	12
3	4	10	14
4	2	14	16
5	4	12	16
6	6	20	26

The vector of proportions (belt wearing rates) on Outbelt 3 from this table is

$$P' = (.174 \quad .167 \quad .286 \quad .125 \quad .250 \quad .231)$$

A model with the design matrix

$$X = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 1 & 1 & 0 & 0 \\ 1 & 0 & 0 & 0 \\ 1 & 0 & 0 & 0 \\ 1 & 0 & 1 & 0 \\ 1 & 0 & 0 & 1 \end{bmatrix}$$

was first fit to the data. This model contains special effects for Group 2, Group 5, and Group 6 so that each of these groups could be compared with the weighted average rate of Groups 1, 3, and 4. None of these effects was statistically significant. Thus, delaying the third meeting for two weeks does not appear to make a difference on the Outbelt 3 rates for Group 2.

Effect of Saturation.

One of the questions of interest was whether the additional messages from the telephone call-ins served to reinforce any tendency to use safety belts. In order to test this possibility, safety belt usage for outbelt 3 was compared with that for Outbelt 2, and Groups 1, 3, and 4 (Relative Risk, AV; Physics, AV; and Physics, A) were compared with the control groups 5 and 6. The model described in the immediate prior section examined the changes from Outbelt 2 to Outbelt 3 for Groups 1, 3, and 4 as compared with Group 5 and again with Group 6. There were no significant differences found. Therefore it may be concluded that the saturation achieved by repeatedly exposing the subjects to the message via the telephone call-ins showed no effect.

Effect of Community Safety Belt Project

To assess the effects of the community safety belt project (CSBP) on the belt wearing behavior of the subjects in this study, the subjects were asked at each meeting to list any health or safety related messages they had heard during the previous week. The responses to these questions were categorized according to the nature of the message. One category corresponded to the Community Seat Belt project.

Of the 133 subjects who were not wearing safety belts when arriving for the first meeting, 20 indicated (at least once over the course of the three meetings) having heard a message concerning the Community Seat Belt Project. The remaining 113 did not indicate hearing such a message. Table 8 shows the belt wearing behavior of subjects arriving for the third meeting, divided by those who reported hearing of the Community Seat Belt Project and those who did not.

Table 8. Belt Status by Awareness of CSBP (Inbelt 3)

Awareness Status	Belted	Not Belted	Total
Heard of CSBP	9 (45.0%)	11 (55.0%)	20
Not Heard of CSBP	32 (28.3%)	81 (71.7%)	113
	$\chi^2_1 = 2.22$	p = .137	

Table 8 shows that the belt wearing rate was higher for those subjects who had heard of CSBP than for those who had not, but with such small numbers this difference was not statistically significant. Table 9 shows the breakdown by treatment group of those who had heard of the CSBP and those who had not.

Table 9. Awareness of CSBP by Group

Awareness Status	1	2	3	4	5	6
Heard of CSBP	5	3	3	4	2	3
	(18.5%)	(16.7%)	(17.7%)	(18.2%)	(10.0%)	(10.3%)
Not Heard of CSBP	22	15	14	18	18	26
	(81.5%)	(83.3%)	(82.3%)	(81.8%)	(90.0%)	(89.7%)
Total	27	18	17	22	20	29

Table 9 shows that the subjects who had heard of the CSBP were quite evenly distributed across the six groups although the frequencies were slightly higher for the experimental groups than for the control groups. Finally, Table 10 shows a cross tabulation of awareness status by experimental and control groups.

Table 10. Awareness of CSBP by Treatment Category

AWARENESS STATUS	EXPERIMENTAL	CONTROL
Heard of CSBP	15	5
	(17.9%)	(10.2%)
Not Heard of CSBP	69	44
	(82.1%)	(89.8%)
Total	84	49

A χ^2 test of association on Table 9 yielded $\chi^2_1 = 1.42$, $p > .20$

While those subjects who reported awareness of the Community Seat Belt Project had slightly higher (but not significantly different) safety belt wearing rates at the time they appeared for the third meeting, the small number of these subjects and their even distribution across the study groups indicate that the CSBP should not produce any noticeable distortion in the results of the present study.

Perceived Health Problems

The questionnaires at each meeting asked the subjects to list what they considered to be the three most important health problems in the U.S. today. It was of interest to evaluate any changes that might have occurred between the first and third meetings with respect to the perception of accidents as a major health problem. To this end an analysis was conducted of subjects who listed accidents as a major health problems at the third meeting, but had not listed accidents at the first meeting. It should be noted that any reference to accidents was included, not solely motor vehicle accidents. Table 11 shows the frequencies of those who did and did not include accidents as a major health problem at the third meeting, given that they had not listed accidents at the first meeting.

Table 11. Changes in Perception of Accidents as a Major Health Problem.

Mentioned Accidents	Group 1	2	3	4	5	6
Yes	4	9	7	5	3	0
	(12.50)	(29.03)	(21.21)	(16.13)	(10.34)	(0.00)
No	28	22	26	26	26	41
	(87.50)	(70.97)	(78.79)	(83.87)	(89.66)	(100.00)

A model was fit to these data which included special effects for each of the control groups (5 and 6) as compared with the experimental groups. A comparison between Groups 5 and 6 showed that they did not differ significantly. On the other hand, the two control groups combined did differ significantly from the experimental groups ($\chi^2_1 = 26.4$, $p = .0000$), with the experimental groups showing a greater increase in the proportions of subjects viewing accidents as a major health problem.

SUMMARY AND CONCLUSIONS

This study examined the effect of safety belt messages on observed belt usage. Subjects were divided into six groups. The first three each received one of three safety belt messages in audiovisual form. Group 4 received the same message as group 3 but in audio form only. Groups 5 and 6 received the same message, one on Heart and Exercise in audiovisual form. Groups 1 through 5 received an experimental questionnaire that asked about a variety of health-related attitudes and behaviors, including motor vehicle accidents and safety belt usage. Group 6 received a control questionnaire that substituted questions on blood pressure and stroke for the motor vehicle injury and safety belt questions, but all other quesions were the same as those on the experimental questionnaire.

All subjects appeared for three different sessions. At the first session the questionnaire was administered. At the second session the message was presented, followed by the questionnaire. At the third session only the questionnaire was administered. Between the second and third sessions each subject made a total of 15 telephone calls to listen to a pre-recorded audio version of the message appropriate to his group.

All subjects came for their last session in the week following their last telephone call-in except for those in group 2. These subjects experienced a two-week delay between the week of their last telephone call and their final meeting.

Observations were made of safety belt usage as subjects arrived for the sessions and again as they left. For participation in the study, subjects were given an incentive, namely, a gift they could select from a variety of merchandise or $25 in cash or a gift certificate from a local department store.

The overall findings were disappointing in that there was no observable effect of the messages on observed safety belt usage. In-depth analyses of the data were conducted to identify any possible relations or leads for further investigation.

There were some differences in the proportions of belt wearers according to age, sex, and race, but none of the differences was statistically significant. This finding was somewhat surprising because previous studies have consistently reported a race difference with nonwhites less likely to wear belts. However, there were few nonwhites in the study, despite extensive efforts to attract them, and those who participated tended to be in higher level occupations. Hence, nonwhite participants were probably even more atypical than were their white counterparts.

When reported frequency of belt usage was related to reports of other health maintenance behaviors, there was a relationship to frequency of dental flossing, as well as a weaker relationship to frequency of eye examinations. Observed belt usage was also related to reported frequency of eye examinations, suggesting that the finding may be real. The

relationship between reported belt usage and observed belt usage was extemely significant.

The group receiving the message in audio form only showed significantly less improvement than the group that received the same message in audiovisual form. However, the finding probably cannot be interpreted to mean that the audiovisual presentation is significantly better, because the group receiving that particular message in audiovisual form was also significantly better than any of the other message groups. It is therefore difficult to conclude that the difference observed was attributable to the form of message presentation.

No differences were found between subjects experiencing a delay between their last call-in message and the final meeting and subjects whose last meeting was conducted immediately after the call-ins were completed. Thus there was no evidence of a delay either "consolidating" the impact of the message or contributing to a weakening of message effect. The additional contributions of the call-in messages were not related to any increment in observed belt usage. Thus it cannot be concluded that the additional exposure to the messages reinforced or strengthened the tendency to wear belts.

During the conduct of the study, a community safety belt program was instituted, with the initial launching occurring just three weeks prior to the first meeting sessions of this study and continuing throughout the duration of this project. Measures of awareness of the community safety belt project did not indicate that it influenced the basic findings of this study. However, the possibility cannot be ruled out that this other activity in some way affected the results of this project.

Subjects' reported judgments of the three major health problems in the U.S. today did not appear to be differentially affected by the various messages presented on safety belts, but the groups receiving safety belt messages showed a greater increase in the perception of accidents (but not necessarily motor vehicle) as a major health problem.

The basic findings are listed below:

1. There were no statistically significant differences in observed belt usage as a function of age, race, or sex.

2. Observed belt usage was associated with greater reported frequency of eye examinations but was not related to other reported health maintenance behaviors included in the questionnaire.

3. There were no significant relationships found between the safety belt messages and observed belt usage.

4. Although the comparison of the message effects of audiovisual presentation versus audio presentation were statistically significant, the finding was not considered conclusive because the particular audiovisual group in question showed significantly better results than the other audiovisual message groups in the study. With the relatively small numbers of subjects in each group and the very large number of statistical tests

that were calculated in this investigation, it would be premature to conclude that the differences observed between the audio and audiovisual presentations are valid.

5. "Saturation" with the message via telephone calls to listen to the message did not lead to increases in belt usage.

6. There was no evidence that the Community Safety Belt Program affected the major findings of the study.

7. The groups receiving safety belt messages showed a greater increase in the proportion of subjects reporting accidents as a major health problem.

On the basis of this study it cannot be concluded that brief messages on the effects of safety belt usage and the risk of motor vehicle injury, combined with follow-up messages via telephone, lead to increases in observed belt usage.

Appendix 1. Description of Safety Messages

1. Relative Risk

You think Road Runner cartoons are silly? Here's something even more silly. You probably lock the door to your home without a second thought. Why? It's simple protection! Then why don't you buckle up for the same protection. It could save you from even worse problems, like getting badly hurt. So why do you lock your door and not wear a seat belt? And you think cartoons are silly! Buckle up and play it safe.

2. One in Three Probability

You think the Road Runner is hard on Wiley Coyote? Well, real life is not any easier on you. At some time during the 50,000 car trips you'll take in your lifetime, one out of every three of you who drive will suffer from a serious, possibly fatal, accident. And no matter how well you drive, you can't control the drunks and bad drivers on the road. But you are in control when you wear your seat belt. Buckle up and beat the odds!

3. Physics of Crash

You think Wiley Coyote gets into too many crashes. Maybe you do, too. In a car accident there's a crash when your car hits something and a second, even worse, crash inside the car when you hit the windshield. Now, you can't always control the first crash, especially with the drunks and bad drivers on the road. But you can stop the second crash. When you wear your seat belt, it just never happens. Buckle up and take control!

4. Heart and Exercise

I'm Fred Brown. Some folks call me Downtown because I take such long shots. That's on the court. Off the court, no one should take a long shot with his health. One way I exercise to keep my heart healthy is by jumping rope. The American Heart Association promotes rope jumping nationwide for old guys like me and for kids. It's a great do anywhere, anytime kind of exercise. Call your American Heart Association if you want to jump rope for your heart.

One of America's leading killers is heart and blood vessel diseases.

Appendix 2. Original and Revised Experimental Designs

Revised Basic Experimental Design
(Original Design)

Approaches	Risk Perception			Conventional		Baseline	
Target Population	Threshold of Risk Tolerance	Certainty/ Pseudocertainity	Relative Risk			Pre-intervention Questionnaire Non-seat Belt Related Message	Irrelevant Questionnaire Non-seat Belt Related Message
Group	M	M	M	M	M		
1	*(40)#						
2		*(40)					
3			*(40)				
4				*(40)			
5	†(40)						
6						*(40)	
7							*(40)
8		†(40)					
9						**(40)	
10			†(40)				
11				†(40)			

* = Audio-visual presentation + multiple audio presentations

† = Multiple audio presentation only

** = Same as group 6, except belt usage behavior recorded by observers in van belt usage behavior observed & recorded by parking lot attendant.

= Sample size

Modified Experimental Design

Approaches	Experimental Groups			Control Groups	
Group	Relative Risk	One in Three	Physics	Heart, Exp, Quest.	Heart Cont' Quest.
1 & 8	*(40)#				
2 & 5		*(40)			
3			*(40)		
10			†(40)		
4 & 6				*(40)	
7, 9, 11					*(40)

* = Audio-visual presentation + multiple audio presentations

† = Multiple audio presentations only

= Sample size

Appendix 3. Information Form Completed for Potential Subjects

HEALTH RESEARCH STUDY FORM

Name: _____
Last First Middle Initial

Phone: Work: _____ Home: _____

Best Hours to Call: Work: _____ Home: _____

Mailing Address: _____

_____

_____

How did you hear about this project? _____

_____

_____

Someone on the project will call you back and work out the best time for you to come. That person will also be able to tell you more about the project.

Thank you for calling.

Appendix 4. Schedule Information Sent to Subjects

Schedule for Health Research Study

Name: _____

1st Meeting _____

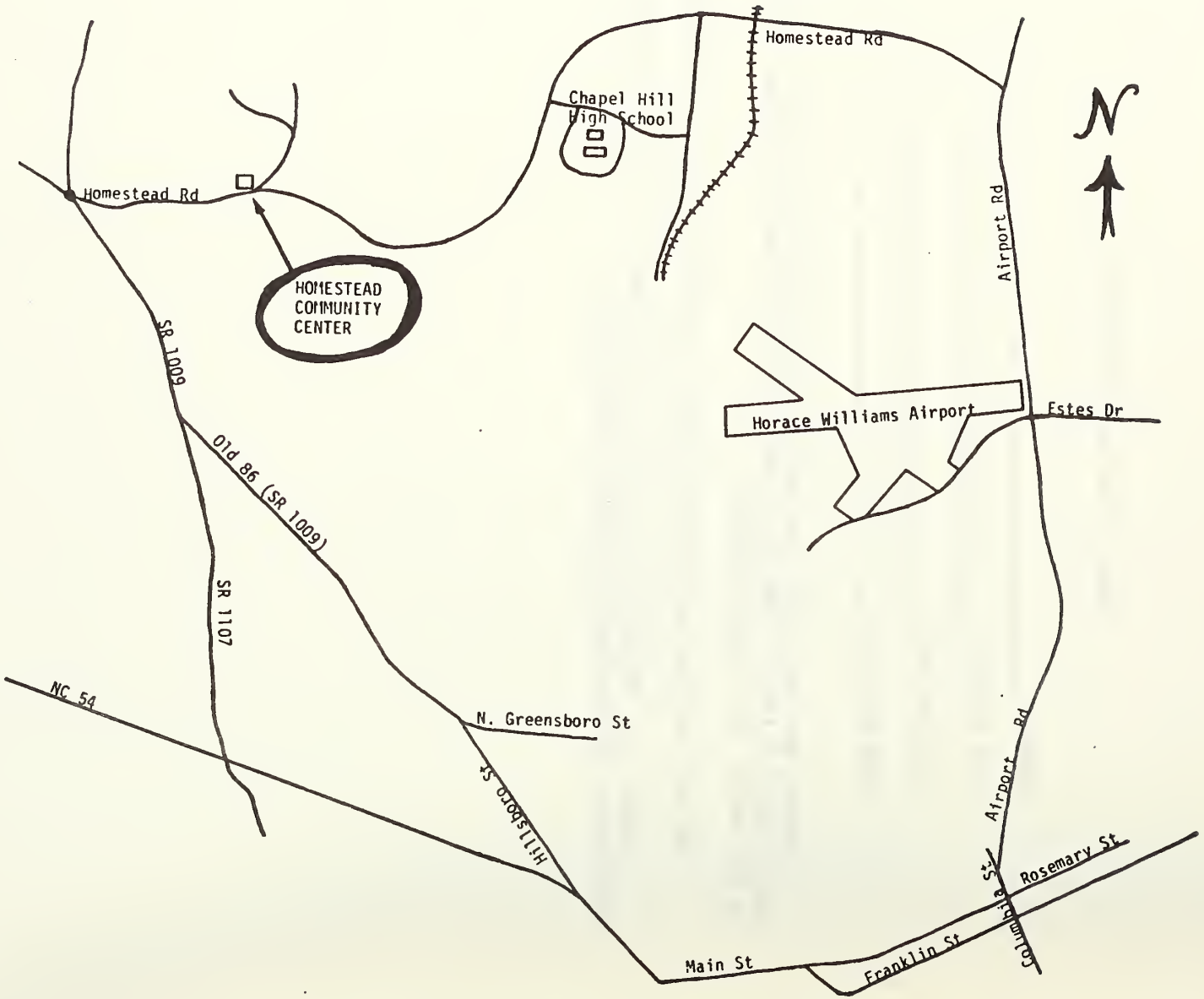
2nd Meeting _____

3rd Meeting _____

Between meeting 2 and 3 you will need to call in (call collect, if you are out of town) 5 times a week for 3 weeks. We will give you further instructions at the end of your second meeting.

You will receive your gift only after the entire schedule has been met.

Please call 962-6578 if you have any questions or problems meeting this schedule or if you need to change a meeting time.


Homestead Rd
Chapel Hill
High School
Homestead Rd
HOMESTEAD
COMMUNITY
CENTER
SR 1009
Old 86 (SR 1009)
SR 1107
NC 54
N. Greensboro St
Hillsboro St
Main St
Airport Rd
Horace Williams Airport
Estes Dr
Airport Rd
Columbia St
Rosemary St
Franklin St
N

Appendix 5. List of Incentive Gifts

Gift Selection

	Retail
Waring 14 sp. Futura II blender	$29.99
Waring ice cream freezer	32.99
Ralph Lauren striped knit shirt	35.00
14K 16" gold chain	35.00
(74625) fm/am electronic digital clock radio	29.95
J.G. Hook button down shirt (men)	31.00
Fieldcrest Accent lace full size blanket	29.00
(66217) men's Timex watch	29.95
(18411) women's Timex Cavatina	28.95
Opium Perfume (1.2 oz.)	30.00
Nike "Intrepid" running shoe (men)	29.00
Shaeffer pen & pencil set (matte (black)	30.00
Hokey carpet sweeper	29.95
Monogrammed towel set (2 bath, 2 hand, 2 wash)	29.50
Nylon suit or dress bag	31.00
(R644/72) Hazel Attache	29.50
Gift Certificates	25.00

Appendix 6. Parking Booth Arrangement

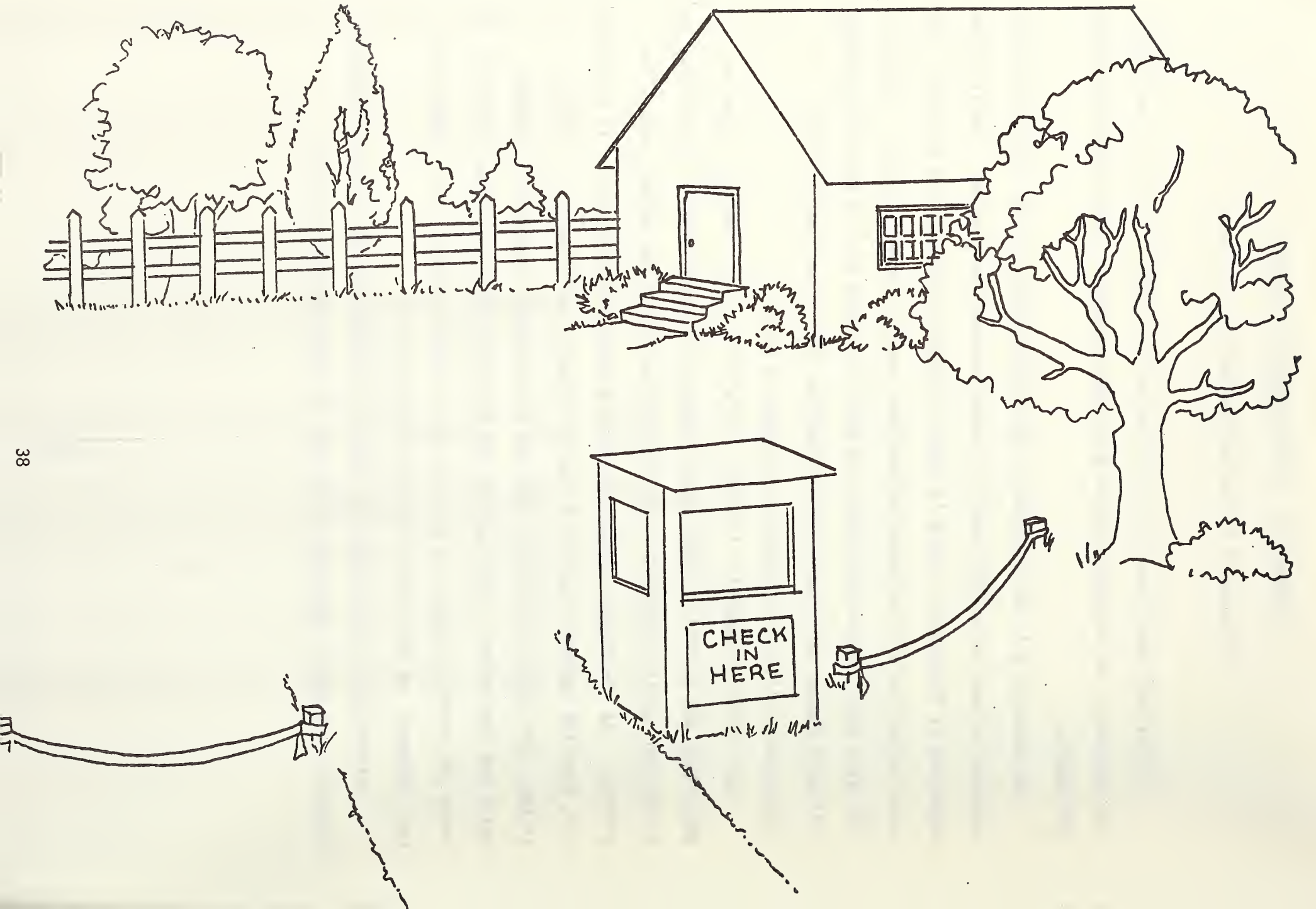
Procedures for Collecting Safety Belt Usage

Safety belt usage data will be collected when subjects arrive at and leave the sessions. The attached diagram shows the arrangement for vehicles arriving and leaving.

An observer will be stationed in the parking booth and all vehicles will be required to pass the parking booth in order to enter the premises. Small stakes connected by fluorescent tape will prevent vehicles from entering any other way, and a large sign will be posted by the booth saying, "Check in Here." Subjects will give their name as they enter and check in. When this is done the observer will note whether belts are used and indicate this on the check-in list. Instructions will also be given as to where to park.

Just prior to subjects' leaving, they will be given a lottery ticket on which they are to fill in their name, address, and phone number. This ticket is to be given to the attendant at the parking booth when the subject leaves the premises. As the subject passes the parking booth, the attendant will stop the car, give the subject a packet of toasted almonds, and collect the lottery ticket. The ticket will be put into one of two boxes, depending on whether belts are used or not. This part of the data collection may become difficult if there are several subjects in the car and if some are belted while others are not. However, we will have to see how this works out.

Information on belt usage can later be recorded from the lottery tickets, complete with names, according to the box in which they were placed.


CHECK
IN
HERE

Blue

HEALTH STUDY QUESTIONNAIRE - 1

FOR RESEARCH ONLY - ALL YOUR ANSWERS WILL BE COMPLETELY CONFIDENTIAL

Please mark only one answer to each of the following questions:

1. How concerned are you about dying from a heart attack?

___ 1 Not concerned

___ 2 Only a little concerned

___ 3 Somewhat concerned

___ 4 Quite a bit concerned

___ 5 Greatly concerned

2. How often do you visit your doctor for a physical checkup?

___ 1 Less than once in three years

___ 2 About once in three years

___ 3 About once in two years

___ 4 About once a year

___ 5 More than once a year

3. How often do you use dental floss on your teeth?

___ 1 Never

___ 2 A few times a month

___ 3 Two or three times a week

___ 4 Once a day

___ 5 More than once a day

4. How concerned are you about being crippled by an automobile accident?

____ 1 Not at all concerned

____ 2 Only a little concerned

____ 3 Somewhat concerned

____ 4 Quite a bit concerned

____ 5 Greatly concerned

5. How often do you wear seat belts while driving?

____ 1 Never

____ 2 Rarely

____ 3 Sometimes

____ 4 Most of the time

____ 5 Always

6. About how many cigarettes do you smoke each day?

____ 1 None

____ 2 Less than 1/2 a pack

____ 3 1/2 to 1 pack

____ 4 1 to 2 packs

____ 5 More than 2 packs

7. Having lung cancer is just a matter of fate so smoking doesn't make that big a difference. How much do you agree or disagree with this statement?

____ 1 Strongly agree

____ 2 Slightly agree

____ 3 Do not agree or disagree

____ 4 Slightly disagree

____ 5 Strongly disagree

8. How concerned are you about being crippled by a heart attack?

____ 1 Not concerned

____ 2 Only a little concerned

____ 3 Somewhat concerned

____ 4 Quite a bit concerned

____ 5 Greatly concerned

9. About how often do you exercise?

____ 1 Not at all or hardly ever

____ 2 Several times a year

____ 3 One or two times a month

____ 4 Two or three times a week

____ 5 Daily or almost daily

10. Having a heart attack is just a matter of fate, so proper diet and exercise don't make that big a difference. How much do you agree or disagree with this statement?

____ Strongly agree
1

____ Slightly agree
2

____ Do not agree or disagree
3

____ Slightly disagree
4

____ Strongly disagree
5

11. Getting killed or injured in a car accident is just a matter of fate, so seat belts don't make that big a difference. How much do you agree or disagree with this statement?

____ Strongly agree
1

____ Slightly agree
2

____ Do not agree or disagree
3

____ Slightly disagree
4

____ Strongly disagree
5

12. How often do you go to have your eyes checked?

____ Less than once in three years
1

____ About once in three years
2

____ About once in two years
3

____ About once a year
4

____ I do not go unless my eyes give me trouble
5

13. The chances of getting into an accident are so small that seat belts aren't really worth the trouble. How much do you agree or disagree with this statement?

____ 1 Strongly agree

____ 2 Slightly agree

____ 3 Do not agree or disagree

____ 4 Slightly disagree

____ 5 Strongly disagree

14. How concerned are you about eating foods that will help keep you healthy?

____ 1 Not at all concerned

____ 2 Not very concerned

____ 3 Not concerned one way or another

____ 4 Somewhat concerned

____ 5 Very concerned

15. How often do you go to a dentist to get your teeth checked?

____ 1 Less than once in two years

____ 2 About once in two years

____ 3 About once a year

____ 4 About once every six months

____ 5 I do not go to the dentist except when my teeth bother me.

16. How concerned are you about being killed in an automobile accident?

____ 1 Not at all concerned

____ 2 Only a little concerned

____ 3 Somewhat concerned

____ 4 Quite a bit concerned

____ 5 Greatly concerned

17. How concerned are you about getting lung cancer?

____ 1 Not at all concerned

____ 2 Only a little concerned

____ 3 Somewhat concerned

____ 4 Quite a bit concerned

____ 5 Greatly concerned

18. Can you remember any health or safety messages you have heard during the last week?

____ 1 No

____ 2 Yes Please describe the type of message heard: _____

_____

_____

19. In your opinion, what do you think are the three most important health problems in the U.S. today?

1. _____

2. _____

3. _____

What is your name? _____

What is your address? _____

_____

What is your home telephone number? _____

How old are you? _____

What is your sex? Male ____ Female ____

What is your race? White ____ Black ____ Other ____

How far did you go in school?

____ Less than high school
____ High school
____ More than high school

HEALTH STUDY QUESTIONNAIRE - 2

FOR RESEARCH ONLY - ALL YOUR ANSWERS WILL BE COMPLETELY CONFIDENTIAL

Please mark only one answer to each of the following questions:

1. How concerned are you about dying from a heart attack?

___ 1 Not concerned

___ 2 Only a little concerned

___ 3 Somewhat concerned

___ 4 Quite a bit concerned

___ 5 Greatly concerned

2. How often do you visit your doctor for a physical checkup?

___ 1 Less than once in three years

___ 2 About once in three years

___ 3 About once in two years

___ 4 About once a year

___ 5 More than once a y

3. How often do you use dental floss on your teeth?

___ 1 Never

___ 2 A few times a month

___ 3 Two or three times a week

___ 4 Once a day

___ 5 More than once a day

4. How concerned are you about being crippled by an automobile accident?

____ 1 Not at all concerned

____ 2 Only a little concerned

____ 3 Somewhat concerned

____ 4 Quite a bit concerned

____ 5 Greatly concerned

5. How often do you wear seat belts while driving?

____ 1 Never

____ 2 Rarely

____ 3 Sometimes

____ 4 Most of the time

____ 5 Always

6. About how many cigarettes do you smoke each day?

____ 1 None

____ 2 Less than 1/2 a pack

____ 3 1/2 to 1 pack

____ 4 1 to 2 packs

____ 5 More than 2 packs

7. Having lung cancer is just a matter of fate so smoking doesn't make that big a difference. How much do you agree or disagree with this statement?

___ 1 Strongly agree

___ 2 Slightly agree

___ 3 Do not agree or disagree

___ 4 Slightly disagree

___ 5 Strongly disagree

8. How concerned are you about being crippled by a heart attack?

___ 1 Not concerned

___ 2 Only a little concerned

___ 3 Somewhat concerned

___ 4 Quite a bit concerned

___ 5 Greatly concerned

9. About how often do you exercise?

___ 1 Not at all or hardly ever

___ 2 Several times a year

___ 3 One or two times a month

___ 4 Two or three times a week

___ 5 Daily or almost daily

10. How do you feel about the message you heard today? How much do you agree or disagree with the message?

____ Strongly agree
1

____ Slightly agree
2

____ Do not agree or disagree
3

____ Slightly disagree
4

____ Strongly disagree
5

11. Having a heart attack is just a matter of fate, so proper diet and exercise don't make that big a difference. How much do you agree or disagree with this statement?

____ Strongly agree
1

____ Slightly agree
2

____ Do not agree or disagree
3

____ Slightly disagree
4

____ Strongly disagree
5

12. Getting killed or injured in a car accident is just a matter of fate, so seat belts don't make that big a difference. How much do you agree or disagree with this statement?

____ Strongly agree
1

____ Slightly agree
2

____ Do not agree or disagree
3

____ Slightly disagree
4

____ Strongly disagree
5

13. How often do you go to have your eyes checked?

_____ 1 Less than once in three years

_____ 2 About once in three years

_____ 3 About once in two years

_____ 4 About once a year

_____ 5 I do not go unless my eyes give me trouble

14. The chances of getting into an accident are so small that seat belts aren't really worth the trouble. How much do you agree or disagree with this statement?

_____ 1 Strongly agree

_____ 2 Slightly agree

_____ 3 Do not agree or disagree

_____ 4 Slightly disagree

_____ 5 Strongly disagree

15. How concerned are you about eating foods that will help keep you healthy?

_____ 1 Not at all concerned

_____ 2 Not very concerned

_____ 3 Not concerned one way or another

_____ 4 Somewhat concerned

_____ 5 Very concerned

16. How often do you go to a dentist to get your teeth checked?

____ 1 Less than once in two years

____ 2 About once in two years

____ 3 About once a year

____ 4 About once every six months

____ 5 I do not go to the dentist except when my teeth bother me.

17. How concerned are you about being killed in an automobile accident?

____ 1 Not at all concerned

____ 2 Only a little concerned

____ 3 Somewhat concerned

____ 4 Quite a bit concerned

____ 5 Greatly concerned

18. How concerned are you about getting lung cancer?

____ 1 Not at all concerned

____ 2 Only a little concerned

____ 3 Somewhat concerned

____ 4 Quite a bit concerned

____ 5 Greatly concerned

19. Can you remember any other health or safety messages you have heard during the last week?

_____ No
1

_____ Yes Please describe the type of message heard: _____
2

_____

_____

20. In your opinion, what do you think are the three most important health problems in the U.S. today?

1. _____

2. _____

3. _____

What is your name? _____

What is your address? _____

_____

What is your home telephone number? _____

How old are you? _____

What is your sex? Male ____ Female ____

What is your race? White ____ Black ____ Other ____

How far did you go in school?

____ Less than high school
____ High school
____ More than high school

HEALTH STUDY QUESTIONNAIRE - 3

FOR RESEARCH ONLY - ALL YOUR ANSWERS WILL BE COMPLETELY CONFIDENTIAL

Please mark only one answer to each of the following questions:

1. How concerned are you about dying from a heart attack?

   ____ 1 Not concerned

   ____ 2 Only a little concerned

   ____ 3 Somewhat concerned

   ____ 4 Quite a bit concerned

   ____ 5 Greatly concerned

2. How often do you visit your doctor for a physical checkup?

   ____ 1 Less than once in three years

   ____ 2 About once in three years

   ____ 3 About once in two years

   ____ 4 About once a year

   ____ 5 More than once a year

3. How often do you use dental floss on your teeth?

   ____ 1 Never

   ____ 2 A few times a month

   ____ 3 Two or three times a week

   ____ 4 Once a day

   ____ 5 More than once a day

4. How concerned are you about being crippled by an automobile accident?

____ Not at all concerned
1

____ Only a little concerned
2

____ Somewhat concerned
3

____ Quite a bit concerned
4

____ Greatly concerned
5

5. How often do you wear seat belts while driving?

____ Never
1

____ Rarely
2

____ Sometimes
3

____ Most of the time
4

____ Always
5

6. About how many cigarettes do you smoke each day?

____ None
1

____ Less than 1/2 a pack
2

____ 1/2 to 1 pack
3

____ 1 to 2 packs
4

____ More than 2 packs
5

7. Having lung cancer is just a matter of fate so smoking doesn't make that big a difference. How much do you agree or disagree with this statement?

____ Strongly agree
1

____ Slightly agree
2

____ Do not agree or disagree
3

____ Slightly disagree
4

____ Strongly disagree
5

8. How concerned are you about being crippled by a heart attack?

____ Not concerned
1

____ Only a little concerned
2

____ Somewhat concerned
3

____ Quite a bit concerned
4

____ Greatly concerned
5

9. About how often do you exercise?

____ Not at all or hardly ever
1

____ Several times a year
2

____ One or two times a month
3

____ Two or three times a week
4

____ Daily or almost daily
5

10. Having a heart attack is just a matter of fate, so proper diet and exercise don't make that big a difference. How much do you agree or disagree with this statement?

____ 1 Strongly agree

____ 2 Slightly agree

____ 3 Do not agree or disagree

____ 4 Slightly disagree

____ 5 Strongly disagree

11. Getting killed or injured in a car accident is just a matter of fate, so seat belts don't make that big a difference. How much do you agree or disagree with this statement?

____ 1 Strongly agree

____ 2 Slightly agree

____ 3 Do not agree or disagree

____ 4 Slightly disagree

____ 5 Strongly disagree

12. How often do you go to have your eyes checked?

____ 1 Less than once in three years

____ 2 About once in three years

____ 3 About once in two years

____ 4 About once a year

____ 5 I do not go unless my eyes give me trouble

13. The chances of getting into an accident are so small that seat belts aren't really worth the trouble. How much do you agree or disagree with this statement?

____ 1 Strongly agree

____ 2 Slightly agree

____ 3 Do not agree or disagree

____ 4 Slightly disagree

____ 5 Strongly disagree

14. How concerned are you about eating foods that will help keep you healthy?

____ 1 Not at all concerned

____ 2 Not very concerned

____ 3 Not concerned one way or another

____ 4 Somewhat concerned

____ 5 Very concerned

15. How often do you go to a dentist to get your teeth checked?

____ 1 Less than once in two years

____ 2 About once in two years

____ 3 About once a year

____ 4 About once every six months

____ 5 I do not go to the dentist except when my teeth bother me.

16. How concerned are you about being killed in an automobile accident?

_____ 1 Not at all concerned

_____ 2 Only a little concerned

_____ 3 Somewhat concerned

_____ 4 Quite a bit concerned

_____ 5 Greatly concerned

17. How concerned are you about getting lung cancer?

_____ 1 Not at all concerned

_____ 2 Only a little concerned

_____ 3 Somewhat concerned

_____ 4 Quite a bit concerned

_____ 5 Greatly concerned

18. Can you remember any health or safety messages you have heard during the last week?

_____ 1 No

_____ 2 Yes Please describe the type of message heard: _____

_____

_____

19. In your opinion, what do you think are the three most important health problems in the U.S. today?

1. _____

2. _____

3. _____

What is your name? _____

What is your address? _____

_____

What is your home telephone number? _____

How old are you? _____

What is your sex? Male ____ Female ____

What is your race? White ____ Black ____ Other ____

How far did you go in school?

____ Less than high school
____ High school
____ More than high school

HEALTH STUDY QUESTIONNAIRE - 4

FOR RESEARCH ONLY - ALL YOUR ANSWERS WILL BE COMPLETELY CONFIDENTIAL

Please mark only one answer to each of the following questions:

1. How concerned are you about dying from a heart attack?

   ____ 1 Not concerned

   ____ 2 Only a little concerned

   ____ 3 Somewhat concerned

   ____ 4 Quite a bit concerned

   ____ 5 Greatly concerned

2. How often do you visit your doctor for a physical checkup?

   ____ 1 Less than once in three years

   ____ 2 About once in three years

   ____ 3 About once in two years

   ____ 4 About once a year

   ____ 5 More than once a year

3. How often do you use dental floss on your teeth?

   ____ 1 Never

   ____ 2 A few times a month

   ____ 3 Two or three times a week

   ____ 4 Once a day

   ____ 5 More than once a day

4. How concerned are you about being crippled by a stroke?

___ 1 Not at all concerned

___ 2 Only a little concerned

___ 3 Somewhat concerned

___ 4 Quite a bit concerned

___ 5 Greatly concerned

5. How often do you get your blood pressure checked?

___ 1 Never or rarely

___ 2 Once every 4 or 5 years

___ 3 Once every 2 or 3 years

___ 4 Once a year

___ 5 More than once a year

6. About how many cigarettes do you smoke each day?

___ 1 None

___ 2 Less than 1/2 a pack

___ 3 1/2 to 1 pack

___ 4 1 to 2 packs

___ 5 More than 2 packs

7. Having lung cancer is just a matter of fate so smoking doesn't make that big a difference. How much do you agree or disagree with this statement?

_____ 1 Strongly agree

_____ 2 Slightly agree

_____ 3 Do not agree or disagree

_____ 4 Slightly disagree

_____ 5 Strongly disagree

8. How concerned are you about being crippled by a heart attack?

_____ 1 Not concerned

_____ 2 Only a little concerned

_____ 3 Somewhat concerned

_____ 4 Quite a bit concerned

_____ 5 Greatly concerned

9. About how often do you exercise?

_____ 1 Not at all or hardly ever

_____ 2 Several times a year

_____ 3 One or two times a month

_____ 4 Two or three times a week

_____ 5 Daily or almost daily

10. Having a heart attack is just a matter of fate, so proper diet and exercise don't make that big a difference. How much do you agree or disagree with this statement?

____ Strongly agree
1

____ Slightly agree
2

____ Do not agree or disagree
3

____ Slightly disagree
4

____ Strongly disagree
5

11. Having a stroke is just a matter of fate so keeping my blood pressure down doesn't make that big a difference. How much do you agree or disagree with this statement?

____ Strongly agree
1

____ Slightly agree
2

____ Do not agree or disagree
3

____ Slightly disagree
4

____ Strongly disagree
5

12. How often do you go to have your eyes checked?

____ Less than once in three years
1

____ About once in three years
2

____ About once in two years
3

____ About once a year
4

____ I do not go unless my eyes give me trouble
5

13. The chances of having a stroke are so small that getting my blood pressure checked really isn't worth the trouble. How much do you agree or disagree with this statement?

____ 1 Strongly agree

____ 2 Slightly agree

____ 3 Do not agree or disagree

____ 4 Slightly disagree

____ 5 Strongly disagree

14. How concerned are you about eating foods that will help keep you healthy?

____ 1 Not at all concerned

____ 2 Not very concerned

____ 3 Not concerned one way or another

____ 4 Somewhat concerned

____ 5 Very concerned

15. How often do you go to a dentist to get your teeth checked?

____ 1 Less than once in two years

____ 2 About once in two years

____ 3 About once a year

____ 4 About once every six months

____ 5 I do not go to the dentist except when my teeth bother me.

16. How concerned are you about being killed by a stroke?

____ 1 Not at all concerned

____ 2 Only a little concerned

____ 3 Somewhat concerned

____ 4 Quite a bit concerned

____ 5 Greatly concerned

17. How concerned are you about getting lung cancer?

____ 1 Not at all concerned

____ 2 Only a little concerned

____ 3 Somewhat concerned

____ 4 Quite a bit concerned

____ 5 Greatly concerned

18. Can you remember any health or safety messages you have heard during the last week?

____ 1 No

____ 2 Yes Please describe the type of message heard: _____

_____

_____

19. In your opinion, what do you think are the three most important health problems in the U.S. today?

1. _____

2. _____

3. _____

What is your name? _____

What is your address? _____

_____

What is your home telephone number? _____

How old are you? _____

What is your sex? Male ____ Female ____

What is your race? White ____ Black ____ Other ____

How far did you go in school?

____ Less than high school
____ High school
____ More than high school

HEALTH STUDY QUESTIONNAIRE - 5

FOR RESEARCH ONLY - ALL YOUR ANSWERS WILL BE COMPLETELY CONFIDENTIAL

Please mark only one answer to each of the following questions:

1. How concerned are you about dying from a heart attack?

   ____ 1 Not concerned

   ____ 2 Only a little concerned

   ____ 3 Somewhat concerned

   ____ 4 Quite a bit concerned

   ____ 5 Greatly concerned

2. How often do you visit your doctor for a physical checkup?

   ____ 1 Less than once in three years

   ____ 2 About once in three years

   ____ 3 About once in two years

   ____ 4 About once a year

   ____ 5 More than once ayear

3. How often do you use dental floss on your teeth?

   ____ 1 Never

   ____ 2 A few times a month

   ____ 3 Two or three times a week

   ____ 4 Once a day

   ____ 5 More than once a day

4. How concerned are you about being crippled by a stroke?

_____ 1 Not at all concerned

_____ 2 Only a little concerned

_____ 3 Somewhat concerned

_____ 4 Quite a bit concerned

_____ 5 Greatly concerned

5. How often do you get your blood pressure checked?

_____ 1 Never or rarely

_____ 2 Once every 4 or 5 years

_____ 3 Once every 2 or 3 years

_____ 4 Once a year

_____ 5 More than once a year

6. About how many cigarettes do you smoke each <u>day</u>?

_____ 1 None

_____ 2 Less than 1/2 a pack

_____ 3 1/2 to 1 pack

_____ 4 1 to 2 packs

_____ 5 More than 2 packs

7. Having lung cancer is just a matter of fate so smoking doesn't make that big a difference. How much do you agree or disagree with this statement?

____ Strongly agree
1

____ Slightly agree
2

____ Do not agree or disagree
3

____ Slightly disagree
4

____ Strongly disagree
5

8. How concerned are you about being crippled by a heart attack?

____ Not concerned
1

____ Only a little concerned
2

____ Somewhat concerned
3

____ Quite a bit concerned
4

____ Greatly concerned
5

9. About how often do you exercise?

____ Not at all or hardly ever
1

____ Several times a year
2

____ One or two times a month
3

____ Two or three times a week
4

____ Daily or almost daily
5

10. How do you feel about the message you heard today? How much do you agree or disagree with this message?

____ 1 Strongly agree

____ 2 Slightly agree

____ 3 Do not agree or disagree

____ 4 Slightly disagree

____ 5 Strongly disagree

11. Having a heart attack is just a matter of fate, so proper diet and exercise don't make that big a difference. How much do you agree or disagree with this statement?

____ 1 Strongly agree

____ 2 Slightly agree

____ 3 Do not agree or disagree

____ 4 Slightly disagree

____ 5 Strongly disagree

12. Having a stroke is just a matter of fate so keeping my blood pressure down doesn't make that big a difference. How much do you agree or disagree with this statement?

____ 1 Strongly agree

____ 2 Slightly agree

____ 3 Do not agree or disagree

____ 4 Slightly disagree

____ 5 Strongly disagree

13. How often do you go to have your eyes checked?

____ 1 Less than once in three years

____ 2 About once in three years

____ 3 About once in two years

____ 4 About once a year

____ 5 I do not go unless my eyes give me trouble

14. The chances of having a stroke are so small that getting my blood pressure checked really isn't worth the trouble. How much do you agree or disagree with this statement?

____ 1 Strongly agree

____ 2 Slightly agree

____ 3 Do not agree or disagree

____ 4 Slightly disagree

____ 5 Strongly disagree

15. How concerned are you about eating foods that will help keep you healthy?

____ 1 Not at all concerned

____ 2 Not very concerned

____ 3 Not concerned one way or another

____ 4 Somewhat concerned

____ 5 Very concerned

16. How often do you go to a dentist to get your teeth checked?

_____ 1 Less than once in two years

_____ 2 About once in two years

_____ 3 About once a year

_____ 4 About once every six months

_____ 5 I do not go to the dentist except when my teeth bother me.

17. How concerned are you about being killed by a stroke?

_____ 1 Not at all concerned

_____ 2 Only a little concerned

_____ 3 Somewhat concerned

_____ 4 Quite a bit concerned

_____ 5 Greatly concerned

18. How concerned are you about getting lung cancer?

_____ 1 Not at all concerned

_____ 2 Only a little concerned

_____ 3 Somewhat concerned

_____ 4 Quite a bit concerned

_____ 5 Greatly concerned

19. Can you remember any other health or safety messages you have heard during the last week?

_____ No
1

_____ Yes Please describe the type of message heard: _____
2

_____

_____

20. In your opinion, what do you think are the three most important health problems in the U.S. today?

1. _____

2. _____

3. _____

What is your name? _____

What is your address? _____

_____

What is your home telephone number? _____

How old are you? _____

What is your sex? Male ____ Female ____

What is your race? White ____ Black ____ Other ____

How far did you go in school?

____ Less than high school
____ High school
____ More than high school

HEALTH STUDY QUESTIONNIARE - 6

FOR RESEARCH ONLY - ALL YOUR ANSWERS WILL BE COMPLETELY CONFIDENTIAL

Please mark only one answer to each of the following questions:

1. How concerned are you about dying from a heart attack?

   ____ 1 Not concerned

   ____ 2 Only a little concerned

   ____ 3 Somewhat concerned

   ____ 4 Quite a bit concerned

   ____ 5 Greatly concerned

2. How often do you visit your doctor for a physical checkup?

   ____ 1 Less than once in three years

   ____ 2 About once in three years

   ____ 3 About once in two years

   ____ 4 About once a year

   ____ 5 More than once a year

3. How often do you use dental floss on your teeth?

   ____ 1 Never

   ____ 2 A few times a <u>month</u>

   ____ 3 Two or three times a <u>week</u>

   ____ 4 Once a <u>day</u>

   ____ 5 More than once a day

4. How concerned are you about being crippled by a stroke?

____ 1 Not at all concerned

____ 2 Only a little concerned

____ 3 Somewhat concerned

____ 4 Quite a bit concerned

____ 5 Greatly concerned

5. How often do you get your blood pressure checked?

____ 1 Never or rarely

____ 2 Once every 4 or 5 years

____ 3 Once every 2 or 3 years

____ 4 Once a year

____ 5 More than once a year

6. About how many cigarettes do you smoke each day?

____ 1 None

____ 2 Less than 1/2 a pack

____ 3 1/2 to 1 pack

____ 4 1 to 2 packs

____ 5 More than 2 packs

7. Having lung cancer is just a matter of fate so smoking doesn't make that big a difference. How much do you agree or disagree with this statement?

_____ 1 Strongly agree

_____ 2 Slightly agree

_____ 3 Do not agree or disagree

_____ 4 Slightly disagree

_____ 5 Strongly disagree

8. How concerned are you about being crippled by a heart attack?

_____ 1 Not concerned

_____ 2 Only a little concerned

_____ 3 Somewhat concerned

_____ 4 Quite a bit concerned

_____ 5 Greatly concerned

9. About how often do you exercise?

_____ 1 Not at all or hardly ever

_____ 2 Several times a year

_____ 3 One or two times a month

_____ 4 Two or three times a week

_____ 5 Daily or almost daily

10. Having a heart attack is just a matter of fate, so proper diet and exercise don't make that big a difference. How much do you agree or disagree with this statement?

____ Strongly agree
1

____ Slightly agree
2

____ Do not agree or disagree
3

____ Slightly disagree
4

____ Strongly disagree
5

11. Having a stroke is just a matter of fate so keeping my blood pressure down doesn't make that big a difference. How much do you agree or disagree with this statement?

____ Strongly agree
1

____ Slightly agree
2

____ Do not agree or disagree
3

____ Slightly disagree
4

____ Strongly disagree
5

12. How often do you go to have your eyes checked?

____ Less than once in three years
1

____ About once in three years
2

____ About once in two years
3

____ About once a year
4

____ I do not go unless my eyes give me trouble
5

13. The chances of having a stroke are so small that getting my blood pressure checked really isn't worth the trouble. How much do you agree or disagree with this statement?

_____ 1 Strongly agree

_____ 2 Slightly agree

_____ 3 Do not agree or disagree

_____ 4 Slightly disagree

_____ 5 Strongly disagree

14. How concerned are you about eating foods that will help keep you healthy?

_____ 1 Not at all concerned

_____ 2 Not very concerned

_____ 3 Not concerned one way or another

_____ 4 Somewhat concerned

_____ 5 Very concerned

15. How often do you go to a dentist to get your teeth checked?

_____ 1 Less than once in two years

_____ 2 About once in two years

_____ 3 About once a year

_____ 4 About once every six months

_____ 5 I do not go to the dentist except when my teeth bother me.

16. How concerned are you about being killed by a stroke?

____ 1 Not at all concerned

____ 2 Only a little concerned

____ 3 Somewhat concerned

____ 4 Quite a bit concerned

____ 5 Greatly concerned

17. How concerned are you about getting lung cancer?

____ 1 Not at all concerned

____ 2 Only a little concerned

____ 3 Somewhat concerned

____ 4 Quite a bit concerned

____ 5 Greatly concerned

18. Can you remember any health or safety messages you have heard during the last week?

____ 1 No

____ 2 Yes Please describe the type of message heard: _____

_____

_____

19. In your opinion, what do you think are the three most important health problems in the U.S. today?

1. _____

2. _____

3. _____

What is your name? _____

What is your address? _____

_____

What is your home telephone number? _____

How old are you? _____

What is your sex? Male ____ Female ____

What is your race? White ____ Black ____ Other ____

How far did you go in school?

____ Less than high school
____ High school
____ More than high school

Appendix 8. Subject Check-In Form

HEALTH STUDY CHECK-IN

NAME	DB	DN	PB	PN

Appendix 9. Information Forms for Telephone Call-Ins.

Green

Groups 1, 8

INSTRUCTIONS FOR MAKING TELEPHONE CALLS

Beginning the week of May 30 you are to call the telephone number shown below and listen to a 30-second recorded message. At the end of the message, leave your name and the date.

You must call on five (5) separate days each week for three weeks. If you can, please call on Monday, Tuesday, Wednesday, Thursday, and Friday, but if for some reason you miss a day, you may call in on Saturday or Sunday to make it up. You can call at any time of the day or night.

If you are out of town, you may call collect.

You must make all your telephone calls and then come in for your last meeting in order to complete the project.

Your special telephone number to call for your message is:

962-3438 (or 962-DIET)

Call five days between May 30 and June 5

Call five days between June 6 and June 12

Call five days between June 13 and June 19

If you need to make any changes in your last appointment, please call 962-6578 to work out the arrangements.

Thank you.

DO NOT LOSE THIS SHEET!

Blue
Group 3

INSTRUCTIONS FOR MAKING TELEPHONE CALLS

Beginning the week of May 30 you are to call the telephone number shown below and listen to a 30-second recorded message. At the end of the message, leave your name and the date.

You must call on five (5) separate days each week for three weeks. If you can, please call on Monday, Tuesday, Wednesday, Thursday, and Friday, but if for some reason you miss a day, you may call in on Saturday or Sunday to make it up. You can call at any time of the day or night.

If you are out of town, you may call collect.

You must make all your telephone calls and then come in for your last meeting in order to complete the project.

Your special telephone number to call for your message is:

962-3463 (or 962-FINE)

Call five days between May 30 and June 5

Call five days between June 6 and June 12

Call five days between June 13 and June 19

If you need to make any changes in your last appointment, please call 962-6578 to work out the arrangements.

Thank you.

DO NOT LOSE THIS SHEET!

Pink

Group 10

INSTRUCTIONS FOR MAKING TELEPHONE CALLS

Beginning the week of May 30 you are to call the telephone number shown below and listen to a 30-second recorded message. At the end of the message, leave your name and the date.

You must call on five (5) separate days each week for three weeks. If you can, please call on Monday, Tuesday, Wednesday, Thursday, and Friday, but if for some reason you miss a day, you may call in on Saturday or Sunday to make it up. You can call at any time of the day or night.

If you are out of town, you may call collect.

You must make all your telephone calls and then come in for your last meeting in order to complete the project.

Your special telephone number to call for your message is:

962-3463 (or 962-FINE)

Call five days between May 30 and June 5

Call five days between June 6 and June 12

Call five days between June 13 and June 19

If you need to make any changes in your last appointment, please call 962-6578 to work out the arrangements.

Thank you.

DO NOT LOSE THIS SHEET!

Yellow

Groups 4, 6

INSTRUCTIONS FOR MAKING TELEPHONE CALLS

Beginning the week of June 6 you are to call the telephone number shown below and listen to a 30-second recorded message. At the end of the message, leave your name and the date.

You must call on five (5) separate days each week for three weeks. If you can, please call on Monday, Tuesday, Wednesday, Thursday, and Friday, but if for some reason you miss a day, you may call in on Saturday or Sunday to make it up. You can call at any time of the day or night.

If you are out of town, you may call collect.

You must make all your telephone calls and then come in for your last meeting in order to complete the project.

Your special telephone number to call for your message is:

962-4278 (or 962-HART)

Call five days between June 6 and June 12

Call five days between June 13 and June 19

Call five days between June 20 and June 26

If you need to make any changes in your last appointment, please call 962-6578 to work out the arrangements.

Thank you.

DO NOT LOSE THIS SHEET!

Gold

Groups 7, 9, 11

INSTRUCTIONS FOR MAKING TELEPHONE CALLS

Beginning the week of June 6 you are to call the telephone number shown below and listen to a 30-second recorded message. At the end of the message, leave your name and the date.

You must call on five (5) separate days each week for three weeks. If you can, please call on Monday, Tuesday, Wednesday, Thursday, and Friday, but if for some reason you miss a day, you may call in on Saturday or Sunday to make it up. You can call at any time of the day or night.

If you are out of town, you may call collect.

You must make all your telephone calls and then come in for your last meeting in order to complete the project.

Your special telephone number to call for your message is:

962-4278 (or 962-HART)

Call five days between June 6 and June 12

Call five days between June 13 and June 19

Call five days between June 20 and June 26

If you need to make any changes in your last appointment, please call 962-6578 to work out the arrangements.

Thank you.

DO NOT LOSE THIS SHEET!

Appendix 10. Information Form Explaining Incentive Raffle

Health Research Study

The drawing for the Microwave Oven and additional prizes will be held on July 15.

The winners will be contacted by telephone, and informed when and where to pick up their prizes.

Anyone interested in knowing who won the lottery prizes may call 966-1044 from July 20 - July 31. A list of winners will be given by a recorded message.

The prizes are: 1 Grand Prize: A Microwave Oven

3 Second Prizes: $30.00 Gift Certificate from Belk

8 Third Prizes: $20.00 Gift Certificate from Belk

12 Fourth Prizes: $10.00 Gift Certificate from Belk

Appendix 11. Tables of Preliminary Cross-Tabs of Questionnaire Responses, Subject Demographics, Changes in Belt Usage, and Message Groups

I. Crosstabs of belt wearing (INBELT1) with questionnaire responses (from first meeting) concerning other health maintenance behaviors for all groups .

1.	INBELT1 By Quest2 (Checkup Frequency)	(N.S.)
2.	INBELT1 By Quest3 (Flossing Frequency)	($p < .03$)
3.	INBELT1 By Quest6 (Smoking)	(N.S.)
4.	INBELT1 By Quest9 (Exercise Frequency)	(N.S.)
5.	INBELT1 By Quest12 (Eye Checkup Frequency)	($p < .10$)
6.	INBELT1 By Quest15 (Dental Checkup Frequency)	(N.S.)
7.	INBELT1 By Race	(N.S.)
8.	INBELT1 By Sex	(N.S.)
9.	INBELT1 By Age	(N.S.)

II. Crosstabs of seat belt question (Quest5) with responses to other health maintenance activities on the questionnaire for Groups 1 to 5 .

1.	Quest5 By Quest2 (Checkup Frequency)	(N.S.)
2.	Quest5 By Quest3 (Flossing Frequency)	(N.S.)
3.	Quest5 By Quest6 (Smoking)	(N.S.)
4.	Quest5 By Quest9 (Exercise)	(N.S.)
5.	Quest5 By Quest12 (Eye Checkup Frequency)	($p < .005$)
6.	Quest5 By Quest15 (Dental Checkup Frequency)	(N.S.)
7.	INBELT1 By Quest5	($p < .0001$)

III. Crosstabs of change in belt wearing and in questionnaire responses by Group and demographic variables for all Groups .

1.	Group By N1 (Question on Heart Attack)	(N.S.)
2.	Group By N2 (Question on Checkup Frequency)	(N.S.)
3.	Group By N3 (Question on Flossing Frequency)	(N.S.)
4.	Group By N4 (Question on Being Crippled by Accident/Stroke)	($p=.0006$)
5.	Group By N5 (Question on Wearing Seat Belts/Checking Blood Pressure)	($p=.0015$)
6.	Group By N6 (Question on Smoking)	(N.S.)
7.	Group By N7 (Question on Smoking and Lung Cancer)	(N.S.)
8.	Group By N8 (Question on Being Crippled by Heart Attack)	(N.S.)
9.	Group By N9 (Question on Exercise Frequency)	(N.S.)
10.	Group By N10 (Question on Diet and Exercise on Heart	(N.S.)
11.	Group By N11 (Question on Belt/Blood Pressure)	(N.S.)
12.	Group By N12 (Question on Eye Checkup Frequency)	(N.S.)
13.	Group By N13 (Question on Belt/Blood Pressure)	(N.S.)
14.	Group By N14 (Question on Eating Habits)	(N.S.)
15.	Group By N15 (Question on Dental Checkup Frequncy)	(N.S.)
16.	Group By N16 (Question on Being Killed By Accident/Stroke)	(N.S.)
17.	Group By N17 (Question on Concern for Lung Cancer)	(N.S.)
18.	Group By R (Change in Seat Belt Wearing)	(N.S.)
19.	R (Change in Seat Belt Wearing) By Race	(N.S.)
20.	R (Change in Seat Belt Wearing) By Sex	(N.S.)
21.	R (Change in Seat Belt Wearing) By Age	(N.S.)

IV. Crosstabs of Change in Seat Belt Wearing and in Response to Seat Belt Questions by Demographic Variables and by Changes in response to selected Questionnaire Items for Groups 1-5 .

1.	N5 (Wearing Seat Belt/Checking Blood Pressure) By Race	(p=.0002)
2.	N5 (Wearing Seat Belt/Checking Blood Pressure) By Sex	(N.S.)
3.	N5 (Wearing Seat Belt/Checking Blood Pressure) By Age	(N.S.)
4.	N5 (Wearing Seat Belt/Checking Blood Pressure) By R (Change in Seat Belt Wearing)	(N.S.)
5.	N5 (Wearing Seat Belt/Checking Blood Pressure) By N2 (Checkup Frequency)	(p=.015)
6.	N5 (Wearing Seat Belt/Checking Blood Pressure) By N6 (Smoking)	(N.S.)
7.	N11 (Belt/Blood Pressure) By Race	(N.S.)
8.	N11 (Belt/Blood Pressure) By Sex	(N.S.)
9.	N11 (Belt/Blood Pressure) By Age	(N.S.)
10.	N11 (Belt/Blood Pressure) By R (Change in Seat Belt Wearing)	(N.S.)
11.	N11 (Belt/Blood Pressure) By N2 (Checkup Frequency)	(N.S.)
12.	N11 (Belt/Blood Pressure) By N6 (Smoking)	(N.S.)
13.	N16 (Being Killed by Accident/Stroke) By Race	(p=.029)
14.	N16 (Being Killed by Accident/Stroke) By Sex	(p=.0089)
15.	N16 (Being killed by Accident/Stroke) By Age	(N.S.)
16.	N16 (Being Killed by Accident/Stroke) By R (Change in Seat Belt Wearing)	(N.S.)
17.	N16 (Being Killed by Accident/Stroke) By N2 (Checkup Frequency)	(p=.0002)
18.	N16 (Being Killed by Accident/Stroke) By N6 (Smoking)	(N.S.)

ALL GROUPS

TABLE OF INBELT1 BY QUEST2

INBELT1 QUEST2 CHECK UP

FREQUENCY / PERCENT / ROW PCT / COL PCT	1	2	3	4	5	TOTAL
B	16	16	17	37	6	92
	7.11	7.11	7.56	16.44	2.67	40.89
	17.39	17.39	18.48	40.22	6.52	
	57.14	50.00	38.64	37.37	27.27	
N	12	16	27	62	16	133
	5.33	7.11	12.00	27.56	7.11	59.11
	9.02	12.03	20.30	46.62	12.03	
	42.86	50.00	61.36	62.63	72.73	
TOTAL	28	32	44	99	22	225
	12.44	14.22	19.56	44.00	9.78	100.00

CHI-SQUARE	6.446	DF= 4	PROB=0.1682
PHI	0.169		
CONTINGENCY COEFFICIENT	0.167		
CRAMER'S V	0.169		
LIKELIHOOD RATIO CHISQUARE	6.452	DF= 4	PROB=0.1679

ALL GROUPS

TABLE OF INBELT1 BY QUEST3

INBELT1 QUEST3 FLOSSING

FREQUENCY / PERCENT / ROW PCT / COL PCT	1	2	3	4	5	TOTAL
B	5	33	31	23	0	92
	2.22	14.67	13.78	10.22	0.00	40.89
	5.43	35.87	33.70	25.00	0.00	
	19.23	40.74	43.66	53.49	0.00	
N	21	48	40	20	4	133
	9.33	21.33	17.78	8.89	1.78	59.11
	15.79	36.09	30.08	15.04	3.01	
	80.77	59.26	56.34	46.51	100.00	
TOTAL	26	81	71	43	4	225
	11.56	36.00	31.56	19.11	1.78	100.00

CHI-SQUARE	10.664	DF= 4	PROB=0.0281
PHI	0.220		
CONTINGENCY COEFFICIENT	0.215		
CRAMER'S V	0.220		
LIKELIHOOD RATIO CHISQUARE	12.766	DF= 4	PROB=0.0125

ALL GROUPS

TABLE OF INBELT1 BY QUEST6

INBELT1 QUEST6 SMOKING

FREQUENCY / PERCENT / ROW PCT / COL PCT	0	1	2	3	4	5	TOTAL
B	0	1	5	2	4	80	92
	0.00	0.44	2.22	0.89	1.78	35.56	40.89
	0.00	1.09	5.43	2.17	4.35	86.96	
	0.00	100.00	41.67	15.38	23.53	44.20	
N	1	0	7	11	13	101	133
	0.44	0.00	3.11	4.89	5.78	44.89	59.11
	0.75	0.00	5.26	8.27	9.77	75.94	
	100.00	0.00	58.33	84.62	76.47	55.80	
TOTAL	1	1	12	13	17	181	225
	0.44	0.44	5.33	5.78	7.56	80.44	100.00

CHI-SQUARE	8.579	DF= 5	PROB=0.1271
PHI	0.195		
CONTINGENCY COEFFICIENT	0.192		
CRAMER'S V	0.195		
LIKELIHOOD RATIO CHISQUARE	9.913	DF= 5	PROB=0.0777

ALL GROUPS

TABLE OF INBELT1 BY QUEST9

INBELT1 QUEST9 EXERCISE

FREQUENCY / PERCENT / ROW PCT / COL PCT	0	1	2	3	4	5	TOTAL
B	0	5	3	15	34	35	92
	0.00	2.22	1.33	6.67	15.11	15.56	40.89
	0.00	5.43	3.26	16.30	36.96	38.04	
	0.00	27.78	27.27	55.56	38.64	43.75	
N	1	13	8	12	54	45	133
	0.44	5.78	3.56	5.33	24.00	20.00	59.11
	0.75	9.77	6.02	9.02	40.60	33.83	
	100.00	72.22	72.73	44.44	61.36	56.25	
TOTAL	1	18	11	27	88	80	225
	0.44	8.00	4.89	12.00	39.11	35.56	100.00

CHI-SQUARE	5.674	DF= 5	PROB=0.3392
PHI	0.159		
CONTINGENCY COEFFICIENT	0.157		
CRAMER'S V	0.159		
LIKELIHOOD RATIO CHISQUARE	6.087	DF= 5	PROB=0.2978

ALL GROUPS

TABLE OF INBELT1 BY QUEST12

INBELT1 QUEST12 EYES CHECKED

FREQUENCY / PERCENT / ROW PCT / COL PCT	1	2	3	4	5	TOTAL
B	25	6	22	25	14	92
	11.16	2.68	9.82	11.16	6.25	41.07
	27.17	6.52	23.91	27.17	15.22	
	43.86	30.00	53.66	45.45	27.45	
N	32	14	19	30	37	132
	14.29	6.25	8.48	13.39	16.52	58.93
	24.24	10.61	14.39	22.73	28.03	
	56.14	70.00	46.34	54.55	72.55	
TOTAL	57	20	41	55	51	224
	25.45	8.93	18.30	24.55	22.77	100.00

CHI-SQUARE	8.226	DF= 4	PROB=0.0837
PHI	0.192		
CONTINGENCY COEFFICIENT	0.188		
CRAMER'S V	0.192		
LIKELIHOOD RATIO CHISQUARE	8.403	DF= 4	PROB=0.0779

ALL GROUPS

TABLE OF INBELT1 BY QUEST15

INBELT1 QUEST15 TEETH CHECKED

FREQUENCY / PERCENT / ROW PCT / COL PCT	1	2	3	4	5	TOTAL
B	2	18	30	35	7	92
	0.89	8.00	13.33	15.56	3.11	40.89
	2.17	19.57	32.61	38.04	7.61	
	15.38	45.00	39.47	43.75	43.75	
N	11	22	46	45	9	133
	4.89	9.78	20.44	20.00	4.00	59.11
	8.27	16.54	34.59	33.83	6.77	
	84.62	55.00	60.53	56.25	56.25	
TOTAL	13	40	76	80	16	225
	5.78	17.78	33.78	35.56	7.11	100.00

CHI-SQUARE	4.166	DF= 4	PROB=0.3840
PHI	0.136		
CONTINGENCY COEFFICIENT	0.135		
CRAMER'S V	0.136		
LIKELIHOOD RATIO CHISQUARE	4.645	DF= 4	PROB=0.3257

ALL GROUPS

TABLE OF INBELT1 BY RACE

INBELT1	RACE		
FREQUENCY / PERCENT / ROW PCT / COL PCT	A	W	TOTAL
B	7	85	92
	3.11	37.78	40.89
	7.61	92.39	
	28.00	42.50	
N	18	115	133
	8.00	51.11	59.11
	13.53	86.47	
	72.00	57.50	
TOTAL	25	200	225
	11.11	88.89	100.00

CHI-SQUARE	1.933	DF= 1	PROB=0.1644
PHI	-0.093		
CONTINGENCY COEFFICIENT	0.092		
CRAMER'S V	0.093		
LIKELIHOOD RATIO CHISQUARE	2.014	DF= 1	PROB=0.1559
CONTINUITY ADJ. CHI-SQUARE	1.380	DF= 1	PROB=0.2402
FISHER'S EXACT TEST (1-TAIL)			PROB=0.1190
(2-TAIL)			PROB=0.1986

ALL GROUPS

TABLE OF INBELT1 BY SEX

INBELT1	SEX		
FREQUENCY PERCENT ROW PCT COL PCT	F	M	TOTAL
B	73 32.44 79.35 42.69	19 8.44 20.65 35.19	92 40.89
N	98 43.56 73.68 57.31	35 15.56 26.32 64.81	133 59.11
TOTAL	171 76.00	54 24.00	225 100.00

CHI-SQUARE	0.956	DF= 1	PROB=0.3281
PHI	0.065		
CONTINGENCY COEFFICIENT	0.065		
CRAMER'S V	0.065		
LIKELIHOOD RATIO CHISQUARE	0.968	DF= 1	PROB=0.3252
CONTINUITY ADJ. CHI-SQUARE	0.671	DF= 1	PROB=0.4127
FISHER'S EXACT TEST (1-TAIL)			PROB=0.2069
(2-TAIL)			PROB=0.3458

ALL GROUPS

TABLE OF INBELT1 BY AGE

INBELT1	AGE			
FREQUENCY / PERCENT / ROW PCT / COL PCT	18-25	26-35	36+	TOTAL
P	23	42	27	92
	10.22	18.67	12.00	40.89
	25.00	45.65	29.35	
	34.33	49.41	36.99	
N	44	43	46	133
	19.56	19.11	20.44	59.11
	33.08	32.33	34.59	
	65.67	50.59	63.01	
TOTAL	67	85	73	225
	29.78	37.78	32.44	100.00

CHI-SQUARE	4.208	DF= 2	PROB=0.1220
PHI	0.137		
CONTINGENCY COEFFICIENT	0.135		
CRAMER'S V	0.137		
LIKELIHOOD RATIO CHISQUARE	4.196	DF= 2	PROB=0.1227

GROUPS 1-5

TABLE OF QUEST5 BY QUEST2

QUEST5 QUEST2 CHECK UP

FREQUENCY / PERCENT / ROW PCT / COL PCT	1	2	3	4	5	TOTAL
1	3	2	7	8	2	22
	1.64	1.09	3.83	4.37	1.09	12.02
	13.64	9.09	31.82	36.36	9.09	
	13.04	8.33	17.95	10.26	10.53	
2	3	4	5	13	3	28
	1.64	2.19	2.73	7.10	1.64	15.30
	10.71	14.29	17.86	46.43	10.71	
	13.04	16.67	12.82	16.67	15.79	
3	3	2	11	17	6	39
	1.64	1.09	6.01	9.29	3.28	21.31
	7.69	5.13	28.21	43.59	15.38	
	13.04	8.33	28.21	21.79	31.58	
4	5	6	9	16	4	40
	2.73	3.28	4.92	8.74	2.19	21.86
	12.50	15.00	22.50	40.00	10.00	
	21.74	25.00	23.08	20.51	21.05	
5	9	10	7	24	4	54
	4.92	5.46	3.83	13.11	2.19	29.51
	16.67	18.52	12.96	44.44	7.41	
	39.13	41.67	17.95	30.77	21.05	
TOTAL	23	24	39	78	19	183
	12.57	13.11	21.31	42.62	10.38	100.00

CHI-SQUARE	10.680	DF= 16	PROB=0.8168
PHI	0.244		
CONTINGENCY COEFFICIENT	0.237		
CRAMER'S V	0.122		
LIKELIHOOD RATIO CHISQUARE	11.408	DF= 16	PROB=0.7836

GROUPS 1-5

TABLE OF QUEST5 BY QUEST3

QUEST5 QUEST3 FLOSSING

FREQUENCY / PERCENT / ROW PCT / COL PCT	1	2	3	4	5	TOTAL
1	5	7	6	2	2	22
	2.73	3.83	3.28	1.09	1.09	12.02
	22.73	31.82	27.27	9.09	9.09	
	21.74	10.00	12.00	5.56	50.00	
2	7	8	6	7	0	28
	3.83	4.37	3.28	3.83	0.00	15.30
	25.00	28.57	21.43	25.00	0.00	
	30.43	11.43	12.00	19.44	0.00	
3	5	15	12	6	1	39
	2.73	8.20	6.56	3.28	0.55	21.31
	12.82	38.46	30.77	15.38	2.56	
	21.74	21.43	24.00	16.67	25.00	
4	3	20	10	7	0	40
	1.64	10.93	5.46	3.83	0.00	21.86
	7.50	50.00	25.00	17.50	0.00	
	13.04	28.57	20.00	19.44	0.00	
5	3	20	16	14	1	54
	1.64	10.93	8.74	7.65	0.55	29.51
	5.56	37.04	29.63	25.93	1.85	
	13.04	28.57	32.00	38.89	25.00	
TOTAL	23	70	50	36	4	183
	12.57	38.25	27.32	19.67	2.19	100.00

CHI-SQUARE	20.609	DF= 16	PROB=0.1860
PHI	0.337		
CONTINGENCY COEFFICIENT	0.320		
CRAMER'S V	0.169		
LIKELIHOOD RATIO CHISQUARE	19.925	DF= 16	PROB=0.2236

GROUPS 1-5

TABLE OF QUEST5 BY QUEST6

QUEST5 QUEST6 SMOKING

FREQUENCY / PERCENT / ROW PCT / COL PCT	0	1	2	3	4	5	TOTAL
1	1	0	1	4	0	16	22
	0.55	0.00	0.55	2.19	0.00	8.74	12.02
	4.55	0.00	4.55	18.18	0.00	72.73	
	100.00	0.00	9.09	33.33	0.00	11.27	
2	0	0	1	1	3	23	28
	0.00	0.00	0.55	0.55	1.64	12.57	15.30
	0.00	0.00	3.57	3.57	10.71	82.14	
	0.00	0.00	9.09	8.33	18.75	16.20	
3	0	0	2	4	7	26	39
	0.00	0.00	1.09	2.19	3.83	14.21	21.31
	0.00	0.00	5.13	10.26	17.95	66.67	
	0.00	0.00	18.18	33.33	43.75	18.31	
4	0	0	2	2	4	32	40
	0.00	0.00	1.09	1.09	2.19	17.49	21.86
	0.00	0.00	5.00	5.00	10.00	80.00	
	0.00	0.00	18.18	16.67	25.00	22.54	
5	0	1	5	1	2	45	54
	0.00	0.55	2.73	0.55	1.09	24.59	29.51
	0.00	1.85	9.26	1.85	3.70	83.33	
	0.00	100.00	45.45	8.33	12.50	31.69	
TOTAL	1	1	11	12	16	142	183
	0.55	0.55	6.01	6.56	8.74	77.60	100.00

CHI-SQUARE	27.499	DF= 20	PROB=0.1271
PHI	0.386		
CONTINGENCY COEFFICIENT	0.360		
CRAMER'S V	0.193		
LIKELIHOOD RATIO CHISQUARE	24.889	DF= 20	PROB=0.2057

GROUPS 1-5

TABLE OF QUEST5 BY QUEST9

QUEST5 QUEST9 EXERCISE

FREQUENCY / PERCENT / ROW PCT / COL PCT	0	1	2	3	4	5	TOTAL
1	0	4	2	2	8	6	22
	0.00	2.19	1.09	1.09	4.37	3.28	12.02
	0.00	18.18	9.09	9.09	36.36	27.27	
	0.00	26.67	22.22	8.00	11.94	9.09	
2	1	2	2	3	6	14	28
	0.55	1.09	1.09	1.64	3.28	7.65	15.30
	3.57	7.14	7.14	10.71	21.43	50.00	
	100.00	13.33	22.22	12.00	8.96	21.21	
3	0	4	3	5	14	13	39
	0.00	2.19	1.64	2.73	7.65	7.10	21.31
	0.00	10.26	7.69	12.82	35.90	33.33	
	0.00	26.67	33.33	20.00	20.90	19.70	
4	0	2	0	8	16	14	40
	0.00	1.09	0.00	4.37	8.74	7.65	21.86
	0.00	5.00	0.00	20.00	40.00	35.00	
	0.00	13.33	0.00	32.00	23.88	21.21	
5	0	3	2	7	23	19	54
	0.00	1.64	1.09	3.83	12.57	10.38	29.51
	0.00	5.56	3.70	12.96	42.59	35.19	
	0.00	20.00	22.22	28.00	34.33	28.79	
TOTAL	1	15	9	25	67	66	183
	0.55	8.20	4.92	13.66	36.61	36.07	100.00

CHI-SQUARE	19.446	DF= 20	PROB=0.4930
PHI	0.326		
CONTINGENCY COEFFICIENT	0.310		
CRAMER'S V	0.163		
LIKELIHOOD RATIO CHISQUARE	18.672	DF= 20	PROB=0.5302

GROUPS 1-5

TABLE OF QUEST5 BY QUEST12

QUEST5 QUEST12 BYES CHECKED

FREQUENCY / PERCENT / ROW PCT / COL PCT	1	2	3	4	5	TOTAL
1	6	7	1	2	6	22
	3.28	3.83	0.55	1.09	3.28	12.02
	27.27	31.82	4.55	9.09	27.27	
	12.50	41.18	3.33	4.76	13.04	
2	8	0	3	7	10	28
	4.37	0.00	1.64	3.83	5.46	15.30
	28.57	0.00	10.71	25.00	35.71	
	16.67	0.00	10.00	16.67	21.74	
3	10	3	5	6	15	39
	5.46	1.64	2.73	3.28	8.20	21.31
	25.64	7.69	12.82	15.38	38.46	
	20.83	17.65	16.67	14.29	32.61	
4	7	4	8	14	7	40
	3.83	2.19	4.37	7.65	3.83	21.86
	17.50	10.00	20.00	35.00	17.50	
	14.58	23.53	26.67	33.33	15.22	
5	17	3	13	13	8	54
	9.29	1.64	7.10	7.10	4.37	29.51
	31.48	5.56	24.07	24.07	14.81	
	35.42	17.65	43.33	30.95	17.39	
TOTAL	48	17	30	42	46	183
	26.23	9.29	16.39	22.95	25.14	100.00

CHI-SQUARE	35.045	DF= 16	PROB=0.0039
PHI	0.438		
CONTINGENCY COEFFICIENT	0.401		
CRAMER'S V	0.219		
LIKELIHOOD RATIO CHISQUARE	34.114	DF= 16	PROB=0.0052

GROUPS 1-5

TABLE OF QUEST5 BY QUEST15

QUEST5 QUEST15 TEETH CHECKED

FREQUENCY / PERCENT / ROW PCT / COL PCT	1	2	3	4	5	TOTAL
1	3	4	4	9	2	22
	1.64	2.19	2.19	4.92	1.09	12.02
	13.64	18.18	18.18	40.91	9.09	
	30.00	12.90	6.35	13.43	16.67	
2	1	4	7	14	2	28
	0.55	2.19	3.83	7.65	1.09	15.30
	3.57	14.29	25.00	50.00	7.14	
	10.00	12.90	11.11	20.90	16.67	
3	4	5	16	12	2	39
	2.19	2.73	8.74	6.56	1.09	21.31
	10.26	12.82	41.03	30.77	5.13	
	40.00	16.13	25.40	17.91	16.67	
4	2	8	17	12	1	40
	1.09	4.37	9.29	6.56	0.55	21.86
	5.00	20.00	42.50	30.00	2.50	
	20.00	25.81	26.98	17.91	8.33	
5	0	10	19	20	5	54
	0.00	5.46	10.38	10.93	2.73	29.51
	0.00	18.52	35.19	37.04	9.26	
	0.00	32.26	30.16	29.85	41.67	
TOTAL	10	31	63	67	12	183
	5.46	16.94	34.43	36.61	6.56	100.00

CHI-SQUARE	16.257	DF= 16	PROB=0.4352
PHI	0.298		
CONTINGENCY COEFFICIENT	0.286		
CRAMER'S V	0.149		
LIKELIHOOD RATIO CHISQUARE	18.611	DF= 16	PROB=0.2894

GROUPS 1-5

TABLE OF INBELT1 BY QUEST5

INBELT1	QUEST5					
FREQUENCY / PERCENT / ROW PCT / COL PCT	1	2	3	4	5	TOTAL
B	0	2	4	23	49	78
	0.00	1.10	2.20	12.64	26.92	42.86
	0.00	2.56	5.13	29.49	62.82	
	0.00	7.14	10.53	57.50	90.74	
N	22	26	34	17	5	104
	12.09	14.29	18.68	9.34	2.75	57.14
	21.15	25.00	32.69	16.35	4.81	
	100.00	92.86	89.47	42.50	9.26	
TOTAL	22	28	38	40	54	182
	12.09	15.38	20.88	21.98	29.67	100.00

CHI-SQUARE	101.362	DF= 4	PROB=0.0001
PHI	0.746		
CONTINGENCY COEFFICIENT	0.598		
CRAMER'S V	0.746		
LIKELIHOOD RATIO CHISQUARE	120.729	DF= 4	PROB=0.0001

ALL GROUPS

TABLE OF GROUP BY N1

GROUP FINAL GROUP N1 HEART ATTACK

GROUP	HIGH	MEDIUM	LOW	TOTAL
1	2	7	30	39
	0.88	3.10	13.27	17.26
	5.13	17.95	76.92	
	9.52	28.00	16.67	
2	3	8	27	38
	1.33	3.54	11.95	16.81
	7.89	21.05	71.05	
	14.29	32.00	15.00	
3	3	5	32	40
	1.33	2.21	14.16	17.70
	7.50	12.50	80.00	
	14.29	20.00	17.78	
4	6	2	25	33
	2.65	0.88	11.06	14.60
	18.18	6.06	75.76	
	28.57	8.00	13.89	
5	4	2	27	33
	1.77	0.88	11.95	14.60
	12.12	6.06	81.82	
	19.05	8.00	15.00	
6	3	1	39	43
	1.33	0.44	17.26	19.03
	6.98	2.33	90.70	
	14.29	4.00	21.67	
TOTAL	21	25	180	226
	9.29	11.06	79.65	100.00

CHI-SQUARE	15.051	DF= 10	PROB=0.1302
PHI	0.258		
CONTINGENCY COEFFICIENT	0.250		
CRAMER'S V	0.182		
LIKELIHOOD RATIO CHISQUARE	15.300	DF= 10	PROB=0.1215

ALL GROUPS

TABLE OF GROUP BY N2

GROUP	FINAL GROUP N2			CHECKUP
FREQUENCY PERCENT ROW PCT COL PCT	HIGH	MEDIUM	LOW	TOTAL
1	6 2.65 15.38 13.64	1 0.44 2.56 5.88	32 14.16 82.05 19.39	39 17.26
2	9 3.98 23.68 20.45	2 0.88 5.26 11.76	27 11.95 71.05 16.36	38 16.81
3	9 3.98 22.50 20.45	5 2.21 12.50 29.41	26 11.50 65.00 15.76	40 17.70
4	6 2.65 18.18 13.64	1 0.44 3.03 5.88	26 11.50 78.79 15.76	33 14.60
5	7 3.10 21.21 15.91	3 1.33 9.09 17.65	23 10.18 69.70 13.94	33 14.60
6	7 3.10 16.28 15.91	5 2.21 11.63 29.41	31 13.72 72.09 18.79	43 19.03
TOTAL	44 19.47	17 7.52	165 73.01	226 100.00

CHI-SQUARE	6.994	DF= 10	PROB=0.7260
PHI	0.176		
CONTINGENCY COEFFICIENT	0.173		
CRAMER'S V	0.124		
LIKELIHOOD RATIO CHISQUARE	7.360	DF= 10	PROB=0.6911

ALL GROUPS

TABLE OF GROUP BY N3

GROUP FINAL GROUP N3 FLOSS

GROUP	HIGH	MEDIUM	LOW	TOTAL
1	24	2	13	39
	10.62	0.88	5.75	17.26
	61.54	5.13	33.33	
	20.34	11.11	14.44	
2	18	3	17	38
	7.96	1.33	7.52	16.81
	47.37	7.89	44.74	
	15.25	16.67	18.89	
3	24	1	15	40
	10.62	0.44	6.64	17.70
	60.00	2.50	37.50	
	20.34	5.56	16.67	
4	15	4	14	33
	6.64	1.77	6.19	14.60
	45.45	12.12	42.42	
	12.71	22.22	15.56	
5	16	3	14	33
	7.08	1.33	6.19	14.60
	48.48	9.09	42.42	
	13.56	16.67	15.56	
6	21	5	17	43
	9.29	2.21	7.52	19.03
	48.84	11.63	39.53	
	17.80	27.78	18.89	
TOTAL	118	18	90	226
	52.21	7.96	39.82	100.00

CHI-SQUARE	5.952	DF= 10	PROB=0.8193
PHI	0.162		
CONTINGENCY COEFFICIENT	0.160		
CRAMER'S V	0.115		
LIKELIHOOD RATIO CHISQUARE	6.352	DF= 10	PROB=0.7849

ALL GROUPS

TABLE OF GROUP BY N4

GROUP FINAL GROUP N4 ACCIDENT/STR

FREQUENCY / PERCENT / ROW PCT / COL PCT	HIGH	MEDIUM	LOW	TOTAL
1	7 3.10 17.95 9.33	3 1.33 7.69 42.86	29 12.83 74.36 20.14	39 17.26
2	17 7.52 44.74 22.67	2 0.88 5.26 28.57	19 8.41 50.00 13.19	38 16.81
3	12 5.31 30.00 16.00	0 0.00 0.00 0.00	28 12.39 70.00 19.44	40 17.70
4	10 4.42 30.30 13.33	0 0.00 0.00 0.00	23 10.18 69.70 15.97	33 14.60
5	4 1.77 12.12 5.33	1 0.44 3.03 14.29	28 12.39 84.85 19.44	33 14.60
6	25 11.06 58.14 33.33	1 0.44 2.33 14.29	17 7.52 39.53 11.81	43 19.03
TOTAL	75 33.19	7 3.10	144 63.72	226 100.00

CHI-SQUARE	31.628	DF= 10	PROB=0.0006
PHI	0.371		
CONTINGENCY COEFFICIENT	0.347		
CRAMER'S V	0.262		
LIKELIHOOD RATIO CHISQUARE	33.203	DF= 10	PROB=0.0003

ALL GROUPS

TABLE OF GROUP BY N5

GROUP FINAL GROUP N5 BELT/BP

FREQUENCY / PERCENT / ROW PCT / COL PCT	HIGH	MEDIUM	LOW	TOTAL
1	14	4	21	39
	6.19	1.77	9.29	17.26
	35.90	10.26	53.85	
	28.57	33.33	12.73	
2	4	1	33	38
	1.77	0.44	14.60	16.81
	10.53	2.63	86.84	
	8.16	8.33	20.00	
3	6	4	30	40
	2.65	1.77	13.27	17.70
	15.00	10.00	75.00	
	12.24	33.33	18.18	
4	12	2	19	33
	5.31	0.88	8.41	14.60
	36.36	6.06	57.58	
	24.49	16.67	11.52	
5	10	1	22	33
	4.42	0.44	9.73	14.60
	30.30	3.03	66.67	
	20.41	8.33	13.33	
6	3	0	40	43
	1.33	0.00	17.70	19.03
	6.98	0.00	93.02	
	6.12	0.00	24.24	
TOTAL	49	12	165	226
	21.68	5.31	73.01	100.00

CHI-SQUARE	28.546	DF= 10	PROB=0.0015
PHI	0.355		
CONTINGENCY COEFFICIENT	0.335		
CRAMER'S V	0.251		
LIKELIHOOD RATIO CHISQUARE	31.192	DF= 10	PROB=0.0005

ALL GROUPS

TABLE OF GROUP BY N6

GROUP FINAL GROUP N6 SMOKING

FREQUENCY / PERCENT / ROW PCT / COL PCT	HIGH	MEDIUM	LOW	TOTAL
1	1	0	38	39
	0.44	0.00	16.81	17.26
	2.56	0.00	97.44	
	5.88	0.00	18.81	
2	3	1	34	38
	1.33	0.44	15.04	16.81
	7.89	2.63	89.47	
	17.65	14.29	16.83	
3	3	3	34	40
	1.33	1.33	15.04	17.70
	7.50	7.50	85.00	
	17.65	42.86	16.83	
4	5	1	27	33
	2.21	0.44	11.95	14.60
	15.15	3.03	81.82	
	29.41	14.29	13.37	
5	2	1	30	33
	0.88	0.44	13.27	14.60
	6.06	3.03	90.91	
	11.76	14.29	14.85	
6	3	1	39	43
	1.33	0.44	17.26	19.03
	6.98	2.33	90.70	
	17.65	14.29	19.31	
TOTAL	17	7	202	226
	7.52	3.10	89.38	100.00

CHI-SQUARE	8.364	DF= 10	PROB=0.5933
PHI	0.192		
CONTINGENCY COEFFICIENT	0.189		
CRAMER'S V	0.136		
LIKELIHOOD RATIO CHISQUARE	8.723	DF= 10	PROB=0.5586

ALL GROUPS

TABLE OF GROUP BY N7

GROUP FINAL GROUP N7 LUNG CANCER

GROUP	HIGH	MEDIUM	LOW	TOTAL
1	6	0	33	39
	2.65	0.00	14.60	17.26
	15.38	0.00	84.62	
	21.43	0.00	17.01	
2	5	1	32	38
	2.21	0.44	14.16	16.81
	13.16	2.63	84.21	
	17.86	25.00	16.49	
3	5	1	34	40
	2.21	0.44	15.04	17.70
	12.50	2.50	85.00	
	17.86	25.00	17.53	
4	4	1	28	33
	1.77	0.44	12.39	14.60
	12.12	3.03	84.85	
	14.29	25.00	14.43	
5	5	0	28	33
	2.21	0.00	12.39	14.60
	15.15	0.00	84.85	
	17.86	0.00	14.43	
6	3	1	39	43
	1.33	0.44	17.26	19.03
	6.98	2.33	90.70	
	10.71	25.00	20.10	
TOTAL	28	4	194	226
	12.39	1.77	85.84	100.00

CHI-SQUARE	3.596	DF= 10	PROB=0.9637
PHI	0.126		
CONTINGENCY COEFFICIENT	0.125		
CRAMER'S V	0.089		
LIKELIHOOD RATIO CHISQUARE	4.932	DF= 10	PROB=0.8957

ALL GROUPS

TABLE OF GROUP BY N8

GROUP FINAL GROUP N8 HEART ATTACK

FREQUENCY / PERCENT / ROW PCT / COL PCT	HIGH	MEDIUM	LOW	TOTAL
1	30	3	6	39
	13.27	1.33	2.65	17.26
	76.92	7.69	15.38	
	16.57	15.00	24.00	
2	34	4	0	38
	15.04	1.77	0.00	16.81
	89.47	10.53	0.00	
	18.78	20.00	0.00	
3	31	3	6	40
	13.72	1.33	2.65	17.70
	77.50	7.50	15.00	
	17.13	15.00	24.00	
4	23	3	7	33
	10.18	1.33	3.10	14.60
	69.70	9.09	21.21	
	12.71	15.00	28.00	
5	24	4	5	33
	10.62	1.77	2.21	14.60
	72.73	12.12	15.15	
	13.26	20.00	20.00	
6	39	3	1	43
	17.26	1.33	0.44	19.03
	90.70	6.98	2.33	
	21.55	15.00	4.00	
TOTAL	181	20	25	226
	80.09	8.85	11.06	100.00

CHI-SQUARE	14.569	DF= 10	PROB=0.1486
PHI	0.254		
CONTINGENCY COEFFICIENT	0.246		
CRAMER'S V	0.180		
LIKELIHOOD RATIO CHISQUARE	19.321	DF= 10	PROB=0.0364

ALL GROUPS

TABLE OF GROUP BY N9

GROUP FINAL GROUP N9 EXERCISE

FREQUENCY / PERCENT / ROW PCT / COL PCT	HIGH	MEDIUM	LOW	TOTAL
1	3	1	35	39
	1.33	0.44	15.49	17.26
	7.69	2.56	89.74	
	12.50	14.29	17.95	
2	4	1	33	38
	1.77	0.44	14.60	16.81
	10.53	2.63	86.84	
	16.67	14.29	16.92	
3	7	2	31	40
	3.10	0.88	13.72	17.70
	17.50	5.00	77.50	
	29.17	28.57	15.90	
4	4	2	27	33
	1.77	0.88	11.95	14.60
	12.12	6.06	81.82	
	16.67	28.57	13.85	
5	3	0	30	33
	1.33	0.00	13.27	14.60
	9.09	0.00	90.91	
	12.50	0.00	15.38	
6	3	1	39	43
	1.33	0.44	17.26	19.03
	6.98	2.33	90.70	
	12.50	14.29	20.00	
TOTAL	24	7	195	226
	10.62	3.10	86.28	100.00

CHI-SQUARE	6.017	DF= 10	PROB=0.8138
PHI	0.163		
CONTINGENCY COEFFICIENT	0.161		
CRAMER'S V	0.115		
LIKELIHOOD RATIO CHISQUARE	6.595	DF= 10	PROB=0.7630

ALL GROUPS

TABLE OF GROUP BY N10

GROUP FINAL GROUP N10 HEART ATTACK

FREQUENCY / PERCENT / ROW PCT / COL PCT	HIGH	MEDIUM	LOW	TOTAL
1	3	1	35	39
	1.33	0.44	15.49	17.26
	7.69	2.56	89.74	
	18.75	16.67	17.16	
2	2	0	36	38
	0.88	0.00	15.93	16.81
	5.26	0.00	94.74	
	12.50	0.00	17.65	
3	3	1	36	40
	1.33	0.44	15.93	17.70
	7.50	2.50	90.00	
	18.75	16.67	17.65	
4	2	1	30	33
	0.88	0.44	13.27	14.60
	6.06	3.03	90.91	
	12.50	16.67	14.71	
5	3	1	29	33
	1.33	0.44	12.83	14.60
	9.09	3.03	87.88	
	18.75	16.67	14.22	
6	3	2	38	43
	1.33	0.88	16.81	19.03
	6.98	4.65	88.37	
	18.75	33.33	18.63	
TOTAL	16	6	204	226
	7.08	2.65	90.27	100.00

CHI-SQUARE	2.265	DF= 10	PROB=0.9939
PHI	0.100		
CONTINGENCY COEFFICIENT	0.100		
CRAMER'S V	0.071		
LIKELIHOOD RATIO CHISQUARE	3.155	DF= 10	PROB=0.9775

ALL GROUPS

TABLE OF GROUP BY N11

GROUP FINAL GROUP N11 BELT/BP

FREQUENCY / PERCENT / ROW PCT / COL PCT	HIGH	MEDIUM	LOW	TOTAL
1	9	3	27	39
	3.98	1.33	11.95	17.26
	23.08	7.69	69.23	
	19.57	17.65	16.56	
2	11	3	24	38
	4.87	1.33	10.62	16.81
	28.95	7.89	63.16	
	23.91	17.65	14.72	
3	9	1	30	40
	3.98	0.44	13.27	17.70
	22.50	2.50	75.00	
	19.57	5.88	18.40	
4	9	4	20	33
	3.98	1.77	8.85	14.60
	27.27	12.12	60.61	
	19.57	23.53	12.27	
5	5	4	24	33
	2.21	1.77	10.62	14.60
	15.15	12.12	72.73	
	10.87	23.53	14.72	
6	3	2	38	43
	1.33	0.88	16.81	19.03
	6.98	4.65	88.37	
	6.52	11.76	23.31	
TOTAL	46	17	163	226
	20.35	7.52	72.12	100.00

CHI-SQUARE	12.981	DF= 10	PROB=0.2247
PHI	0.240		
CONTINGENCY COEFFICIENT	0.233		
CRAMER'S V	0.169		
LIKELIHOOD RATIO CHISQUARE	14.281	DF= 10	PROB=0.1606

ALL GROUPS

TABLE OF GROUP BY N12

GROUP FINAL GROUP N12 EYE CHECK

FREQUENCY / PERCENT / ROW PCT / COL PCT	HIGH	MEDIUM	LOW	TOTAL
1	19	2	18	39
	8.41	0.88	7.96	17.26
	48.72	5.13	46.15	
	13.29	16.67	25.35	
2	25	1	12	38
	11.06	0.44	5.31	16.81
	65.79	2.63	31.58	
	17.48	8.33	16.90	
3	27	1	12	40
	11.95	0.44	5.31	17.70
	67.50	2.50	30.00	
	18.88	8.33	16.90	
4	21	3	9	33
	9.29	1.33	3.98	14.60
	63.64	9.09	27.27	
	14.69	25.00	12.68	
5	20	2	11	33
	8.85	0.88	4.87	14.60
	60.61	6.06	33.33	
	13.99	16.67	15.49	
6	31	3	9	43
	13.72	1.33	3.98	19.03
	72.09	6.98	20.93	
	21.68	25.00	12.68	
TOTAL	143	12	71	226
	63.27	5.31	31.42	100.00

CHI-SQUARE	8.728	DF= 10	PROB=0.5561
PHI	0.197		
CONTINGENCY COEFFICIENT	0.193		
CRAMER'S V	0.139		
LIKELIHOOD RATIO CHISQUARE	8.768	DF= 10	PROB=0.5542

ALL GROUPS

TABLE OF GROUP BY N13

GROUP FINAL GROUP N13 BELT/BP

FREQUENCY / PERCENT / ROW PCT / COL PCT	HIGH	MEDIUM	LOW	TOTAL
1	7	1	31	39
	3.10	0.44	13.72	17.26
	17.95	2.56	79.49	
	21.88	12.50	16.67	
2	6	2	30	38
	2.65	0.88	13.27	16.81
	15.79	5.26	78.95	
	18.75	25.00	16.13	
3	3	2	35	40
	1.33	0.88	15.49	17.70
	7.50	5.00	87.50	
	9.38	25.00	18.82	
4	4	1	28	33
	1.77	0.44	12.39	14.60
	12.12	3.03	84.85	
	12.50	12.50	15.05	
5	5	1	27	33
	2.21	0.44	11.95	14.60
	15.15	3.03	81.82	
	15.63	12.50	14.52	
6	7	1	35	43
	3.10	0.44	15.49	19.03
	16.28	2.33	81.40	
	21.88	12.50	18.82	
TOTAL	32	8	186	226
	14.16	3.54	82.30	100.00

CHI-SQUARE	3.120	DF= 10	PROB=0.9785
PHI	0.117		
CONTINGENCY COEFFICIENT	0.117		
CRAMER'S V	0.083		
LIKELIHOOD RATIO CHISQUARE	3.314	DF= 10	PROB=0.9731

ALL GROUPS

TABLE OF GROUP BY N14

GROUP FINAL GROUP N14 EATING

FREQUENCY / PERCENT / ROW PCT / COL PCT	HIGH	MEDIUM	LOW	TOTAL
1	14	1	24	39
	6.19	0.44	10.62	17.26
	35.90	2.56	61.54	
	16.67	5.88	19.20	
2	16	3	19	38
	7.08	1.33	8.41	16.81
	42.11	7.89	50.00	
	19.05	17.65	15.20	
3	14	7	19	40
	6.19	3.10	8.41	17.70
	35.00	17.50	47.50	
	16.67	41.18	15.20	
4	11	2	20	33
	4.87	0.88	8.85	14.60
	33.33	6.06	60.61	
	13.10	11.76	16.00	
5	13	2	18	33
	5.75	0.88	7.96	14.60
	39.39	6.06	54.55	
	15.48	11.76	14.40	
6	16	2	25	43
	7.08	0.88	11.06	19.03
	37.21	4.65	58.14	
	19.05	11.76	20.00	
TOTAL	84	17	125	226
	37.17	7.52	55.31	100.00

CHI-SQUARE	8.867	DF= 10	PROB=0.5448
PHI	0.198		
CONTINGENCY COEFFICIENT	0.194		
CRAMER'S V	0.140		
LIKELIHOOD RATIO CHISQUARE	7.948	DF= 10	PROB=0.6339

ALL GROUPS

TABLE OF GROUP BY N15

GROUP FINAL GROUP N15 DENTIST

FREQUENCY / PERCENT / ROW PCT / COL PCT	HIGH	MEDIUM	LOW	TOTAL
1	28	1	10	39
	12.39	0.44	4.42	17.26
	71.79	2.56	25.64	
	17.18	8.33	19.61	
2	28	1	9	38
	12.39	0.44	3.98	16.81
	73.68	2.63	23.68	
	17.18	8.33	17.65	
3	29	2	9	40
	12.83	0.88	3.98	17.70
	72.50	5.00	22.50	
	17.79	16.67	17.65	
4	26	3	4	33
	11.50	1.33	1.77	14.60
	78.79	9.09	12.12	
	15.95	25.00	7.84	
5	23	3	7	33
	10.18	1.33	3.10	14.60
	69.70	9.09	21.21	
	14.11	25.00	13.73	
6	29	2	12	43
	12.83	0.88	5.31	19.03
	67.44	4.65	27.91	
	17.79	16.67	23.53	
TOTAL	163	12	51	226
	72.12	5.31	22.57	100.00

CHI-SQUARE	5.612	DF= 10	PROB=0.8468
PHI	0.158		
CONTINGENCY COEFFICIENT	0.156		
CRAMER'S V	0.111		
LIKELIHOOD RATIO CHISQUARE	5.827	DF= 10	PROB=0.8296

ALL GROUPS

TABLE OF GROUP BY N16

GROUP FINAL GROUP N16 ACCIDENT/STR

FREQUENCY / PERCENT / ROW PCT / COL PCT	HIGH	MEDIUM	LOW	TOTAL
1	20	2	17	39
	8.85	0.88	7.52	17.26
	51.28	5.13	43.59	
	15.15	25.00	19.77	
2	26	1	11	38
	11.50	0.44	4.87	16.81
	68.42	2.63	28.95	
	19.70	12.50	12.79	
3	19	1	20	40
	8.41	0.44	8.85	17.70
	47.50	2.50	50.00	
	14.39	12.50	23.26	
4	19	2	12	33
	8.41	0.88	5.31	14.60
	57.58	6.06	36.36	
	14.39	25.00	13.95	
5	18	1	14	33
	7.96	0.44	6.19	14.60
	54.55	3.03	42.42	
	13.64	12.50	16.28	
6	30	1	12	43
	13.27	0.44	5.31	19.03
	69.77	2.33	27.91	
	22.73	12.50	13.95	
TOTAL	132	8	86	226
	58.41	3.54	38.05	100.00

CHI-SQUARE	8.125	DF= 10	PROB=0.6166
PHI	0.190		
CONTINGENCY COEFFICIENT	0.186		
CRAMER'S V	0.134		
LIKELIHOOD RATIO CHISQUARE	8.656	DF= 10	PROB=0.6234

ALL GROUPS

TABLE OF GROUP BY N17

GROUP FINAL GROUP N17 LUNG CANCER

FREQUENCY / PERCENT / ROW PCT / COL PCT	HIGH	MEDIUM	LOW	TOTAL
1	20	1	18	39
	8.85	0.44	7.96	17.26
	51.28	2.56	46.15	
	21.98	3.70	16.67	
2	17	7	14	38
	7.52	3.10	6.19	16.81
	44.74	18.42	36.84	
	18.68	25.93	12.96	
3	17	6	17	40
	7.52	2.65	7.52	17.70
	42.50	15.00	42.50	
	18.68	22.22	15.74	
4	13	6	14	33
	5.75	2.65	6.19	14.60
	39.39	18.18	42.42	
	14.29	22.22	12.96	
5	8	3	22	33
	3.54	1.33	9.73	14.60
	24.24	9.09	66.67	
	8.79	11.11	20.37	
6	16	4	23	43
	7.08	1.77	10.18	19.03
	37.21	9.30	53.49	
	17.58	14.81	21.30	
TOTAL	91	27	108	226
	40.27	11.95	47.79	100.00

CHI-SQUARE	13.855	DF= 10	PROB=0.1797
PHI	0.248		
CONTINGENCY COEFFICIENT	0.240		
CRAMER'S V	0.175		
LIKELIHOOD RATIO CHISQUARE	14.969	DF= 10	PROB=0.1332

ALL GROUPS

TABLE OF GROUP BY R

GROUP FINAL GROUP R

FREQUENCY / PERCENT / ROW PCT / COL PCT	HIGH	MEDIUM	LOW	TOTAL
1	5	6	28	39
	2.21	2.65	12.39	17.26
	12.82	15.38	71.79	
	15.15	21.43	16.97	
2	6	4	28	38
	2.65	1.77	12.39	16.81
	15.79	10.53	73.68	
	18.18	14.29	16.97	
3	6	5	29	40
	2.65	2.21	12.83	17.70
	15.00	12.50	72.50	
	18.18	17.86	17.58	
4	7	1	25	33
	3.10	0.44	11.06	14.60
	21.21	3.03	75.76	
	21.21	3.57	15.15	
5	4	4	25	33
	1.77	1.77	11.06	14.60
	12.12	12.12	75.76	
	12.12	14.29	15.15	
6	5	8	30	43
	2.21	3.54	13.27	19.03
	11.63	18.60	69.77	
	15.15	28.57	18.18	
TOTAL	33	28	165	226
	14.60	12.39	73.01	100.00

CHI-SQUARE	5.720	DF= 10	PROB=0.8382
PHI	0.159		
CONTINGENCY COEFFICIENT	0.157		
CRAMER'S V	0.112		
LIKELIHOOD RATIO CHISQUARE	6.461	DF= 10	PROB=0.7752

ALL GROUPS

TABLE OF R BY RACE

R	RACE		
FREQUENCY / PERCENT / ROW PCT / COL PCT	A	W	TOTAL
HIGH	3	30	33
	1.33	13.27	14.60
	9.09	90.91	
	12.00	14.93	
MEDIUM	3	25	28
	1.33	11.06	12.39
	10.71	89.29	
	12.00	12.44	
LOW	19	146	165
	8.41	64.60	73.01
	11.52	88.48	
	76.00	72.64	
TOTAL	25	201	226
	11.06	88.94	100.00

CHI-SQUARE	0.168	DF= 2	PROB=0.9193
PHI	0.027		
CONTINGENCY COEFFICIENT	0.027		
CRAMER'S V	0.027		
LIKELIHOOD RATIO CHISQUARE	0.175	DF= 2	PROB=0.9161

ALL GROUPS

TABLE OF R BY SEX

R	SEX		
FREQUENCY PERCENT ROW PCT COL PCT	F	M	TOTAL
HIGH	28 12.39 84.85 16.28	5 2.21 15.15 9.26	33 14.60
MEDIUM	19 8.41 67.86 11.05	9 3.98 32.14 16.67	28 12.39
LOW	125 55.31 75.76 72.67	40 17.70 24.24 74.07	165 73.01
TOTAL	172 76.11	54 23.89	226 100.00

CHI-SQUARE	2.446	DF= 2	PROB=0.2944
PHI	0.104		
CONTINGENCY COEFFICIENT	0.103		
CRAMER'S V	0.104		
LIKELIHOOD RATIO CHISQUARE	2.524	DF= 2	PROB=0.2831

ALL GROUPS

TABLE OF R BY AGE

R	AGE			
FREQUENCY PERCENT ROW PCT COL PCT	18-25	26-35	36+	TOTAL
HIGH	12 5.31 36.36 17.91	10 4.42 30.30 11.63	11 4.87 33.33 15.07	33 14.60
MEDIUM	9 3.98 32.14 13.43	7 3.10 25.00 8.14	12 5.31 42.86 16.44	28 12.39
LOW	46 20.35 27.88 68.66	69 30.53 41.82 80.23	50 22.12 30.30 68.49	165 73.01
TOTAL	67 29.65	86 38.05	73 32.30	226 100.00

CHI-SQUARE	4.305	DF= 4	PROB=0.3663
PHI	0.138		
CONTINGENCY COEFFICIENT	0.137		
CRAMER'S V	0.098		
LIKELIHOOD RATIO CHISQUARE	4.381	DF= 4	PROB=0.3569

GROUPS 1-5

TABLE OF N5 BY RACE

N5 BELT/BP RACE

FREQUENCY / PERCENT / ROW PCT / COL PCT	B	W	TOTAL
HIGH	13	33	46
	7.10	18.03	25.14
	28.26	71.74	
	61.90	20.37	
MEDIUM	1	11	12
	0.55	6.01	6.56
	8.33	91.67	
	4.76	6.79	
LOW	7	118	125
	3.83	64.48	68.31
	5.60	94.40	
	33.33	72.84	
TOTAL	21	162	183
	11.48	88.52	100.00

CHI-SQUARE	17.123	DF= 2	PROB=0.0002
PHI	0.306		
CONTINGENCY COEFFICIENT	0.293		
CRAMER'S V	0.306		
LIKELIHOOD RATIO CHISQUARE	14.806	DF= 2	PROB=0.0006

GROUPS 1-5

TABLE OF NS BY SEX

NS BELT/BP SEX

FREQUENCY / PERCENT / ROW PCT / COL PCT	F	M	TOTAL
HIGH	38	8	46
	20.77	4.37	25.14
	82.61	17.39	
	27.14	18.60	
MEDIUM	8	4	12
	4.37	2.19	6.56
	66.67	33.33	
	5.71	9.30	
LOW	94	31	125
	51.37	16.94	68.31
	75.20	24.80	
	67.14	72.09	
TOTAL	140	43	183
	76.50	23.50	100.00

CHI-SQUARE	1.718	DF= 2	PROB=0.4236
PHI	0.097		
CONTINGENCY COEFFICIENT	0.096		
CRAMER'S V	0.097		
LIKELIHOOD RATIO CHISQUARE	1.733	DF= 2	PROB=0.4204

GROUPS 1-5

TABLE OF N5 BY AGE

N5 BELT/BP AGE

FREQUENCY / PERCENT / ROW PCT / COL PCT	18-25	26-35	36+	TOTAL
HIGH	14	14	18	46
	7.65	7.65	9.84	25.14
	30.43	30.43	39.13	
	28.00	19.44	29.51	
MEDIUM	4	5	3	12
	2.19	2.73	1.64	6.56
	33.33	41.67	25.00	
	8.00	6.94	4.92	
LOW	32	53	40	125
	17.49	28.96	21.86	68.31
	25.60	42.40	32.00	
	64.00	73.61	65.57	
TOTAL	50	72	61	183
	27.32	39.34	33.33	100.00

CHI-SQUARE	2.479	DF= 4	PROB=0.6484
PHI	0.116		
CONTINGENCY COEFFICIENT	0.116		
CRAMER'S V	0.082		
LIKELIHOOD RATIO CHISQUARE	2.537	DF= 4	PROB=0.6380

GROUPS 1-5

TABLE OF N5 BY R

N5 BELT/BP R

FREQUENCY / PERCENT / ROW PCT / COL PCT	HIGH	MEDIUM	LOW	TOTAL
HIGH	9	5	32	46
	4.92	2.73	17.49	25.14
	19.57	10.87	69.57	
	32.14	25.00	23.70	
MEDIUM	1	0	11	12
	0.55	0.00	6.01	6.56
	8.33	0.00	91.67	
	3.57	0.00	8.15	
LOW	18	15	92	125
	9.84	8.20	50.27	68.31
	14.40	12.00	73.60	
	64.29	75.00	68.15	
TOTAL	28	20	135	183
	15.30	10.93	73.77	100.00

CHI-SQUARE	3.068	DF= 4	PROB=0.5465
PHI	0.129		
CONTINGENCY COEFFICIENT	0.128		
CRAMER'S V	0.092		
LIKELIHOOD RATIO CHISQUARE	4.373	DF= 4	PROB=0.3579

GROUPS 1-5

TABLE OF N5 BY N2

N5	BELT/BP	N2	CHECKUP	
FREQUENCY PERCENT ROW PCT COL PCT	HIGH	MEDIUM	LOW	TOTAL
HIGH	13 7.10 28.26 35.14	7 3.83 15.22 58.33	26 14.21 56.52 19.40	46 25.14
MEDIUM	3 1.64 25.00 8.11	1 0.55 8.33 8.33	8 4.37 66.67 5.97	12 6.56
LOW	21 11.48 16.80 56.76	4 2.19 3.20 33.33	100 54.64 80.00 74.63	125 68.31
TOTAL	37 20.22	12 6.56	134 73.22	183 100.00

CHI-SQUARE	12.404	DF= 4	PROB=0.0146
PHI	0.260		
CONTINGENCY COFFFICIENT	0.252		
CRAMER'S V	0.184		
LIKELIHOOD RATIO CHISQUARE	11.463	DF= 4	PROB=0.0218

GROUPS 1-5

TABLE OF N5 BY N6

N5 BELT/BP N6 SMOKING

FREQUENCY / PERCENT / ROW PCT / COL PCT	HIGH	MEDIUM	LOW	TOTAL
HIGH	3	2	41	46
	1.64	1.09	22.40	25.14
	6.52	4.35	89.13	
	21.43	33.33	25.15	
MEDIUM	0	1	11	12
	0.00	0.55	6.01	6.56
	0.00	8.33	91.67	
	0.00	16.67	6.75	
LOW	11	3	111	125
	6.01	1.64	60.66	68.31
	8.80	2.40	88.80	
	78.57	50.00	68.10	
TOTAL	14	6	163	183
	7.65	3.28	89.07	100.00

CHI-SQUARE	2.611	DF= 4	PROB=0.6250
PHI	0.119		
CONTINGENCY COEFFICIENT	0.119		
CRAMER'S V	0.084		
LIKELIHOOD RATIO CHISQUARE	3.255	DF= 4	PROB=0.5160

GROUPS 1-5

TABLE OF N11 BY RACE

N11 BELT/BP RACE

FREQUENCY / PERCENT / ROW PCT / COL PCT	B	W	TOTAL
HIGH	4	39	43
	2.19	21.31	23.50
	9.30	90.70	
	19.05	24.07	
MEDIUM	3	12	15
	1.64	6.56	8.20
	20.00	80.00	
	14.29	7.41	
LOW	14	111	125
	7.65	60.66	68.31
	11.20	88.80	
	66.67	68.52	
TOTAL	21	162	183
	11.48	88.52	100.00

CHI-SQUARE	1.282	DF= 2	PROB=0.5267
PHI	0.084		
CONTINGENCY COEFFICIENT	0.083		
CRAMER'S V	0.084		
LIKELIHOOD RATIO CHISQUARE	1.125	DF= 2	PROB=0.5699

GROUPS 1-5

TABLE OF N11 BY SEX

N11 BELT/BP SEX

FREQUENCY / PERCENT / ROW PCT / COL PCT	F	M	TOTAL
HIGH	33	10	43
	18.03	5.46	23.50
	76.74	23.26	
	23.57	23.26	
MEDIUM	10	5	15
	5.46	2.73	8.20
	66.67	33.33	
	7.14	11.63	
LOW	97	28	125
	53.01	15.30	68.31
	77.60	22.40	
	69.29	65.12	
TOTAL	140	43	183
	76.50	23.50	100.00

CHI-SQUARE	0.892	DF= 2	PROB=0.6400
PHI	0.070		
CONTINGENCY COEFFICIENT	0.070		
CRAMER'S V	0.070		
LIKELIHOOD RATIO CHISQUARE	0.830	DF= 2	PROB=0.6602

GROUPS 1-5

TABLE OF N11 BY AGE

N11 BELT/BP AGE

FREQUENCY / PERCENT / ROW PCT / COL PCT	18-25	26-35	36+	TOTAL
HIGH	17	16	10	43
	9.29	8.74	5.46	23.50
	39.53	37.21	23.26	
	34.00	22.22	16.39	
MEDIUM	2	6	7	15
	1.09	3.28	3.83	8.20
	13.33	40.00	46.67	
	4.00	8.33	11.48	
LOW	31	50	44	125
	16.94	27.32	24.04	68.31
	24.80	40.00	35.20	
	62.00	69.44	72.13	
TOTAL	50	72	61	183
	27.32	39.34	33.33	100.00

CHI-SQUARE	6.019	DF= 4	PROB=0.1978
PHI	0.181		
CONTINGENCY COEFFICIENT	0.178		
CRAMER'S V	0.128		
LIKELIHOOD RATIO CHISQUARE	6.058	DF= 4	PROB=0.1948

GROUPS 1-5

TABLE OF N11 BY R

N11 BELT/BP R

FREQUENCY PERCENT ROW PCT COL PCT	HIGH	MEDIUM	LOW	TOTAL
HIGH	8	2	33	43
	4.37	1.09	18.03	23.50
	18.60	4.65	76.74	
	28.57	10.00	24.44	
MEDIUM	2	3	10	15
	1.09	1.64	5.46	8.20
	13.33	20.00	66.67	
	7.14	15.00	7.41	
LOW	18	15	92	125
	9.84	8.20	50.27	68.31
	14.40	12.00	73.60	
	64.29	75.00	68.15	
TOTAL	28	20	135	183
	15.30	10.93	73.77	100.00

CHI-SQUARE	3.377	DF= 4	PROB=0.4969
PHI	0.136		
CONTINGENCY COEFFICIENT	0.135		
CRAMER'S V	0.096		
LIKELIHOOD RATIO CHISQUARE	3.565	DF= 4	PROB=0.4681

GROUPS 1-5

TABLE OF N11 BY N2

N11 BELT/BP N2 CHECKUP

FREQUENCY / PERCENT / ROW PCT / COL PCT	HIGH	MEDIUM	LOW	TOTAL
HIGH	10	4	29	43
	5.46	2.19	15.85	23.50
	23.26	9.30	67.44	
	27.03	33.33	21.64	
MEDIUM	4	2	9	15
	2.19	1.09	4.92	8.20
	26.67	13.33	60.00	
	10.81	16.67	6.72	
LOW	23	6	96	125
	12.57	3.28	52.46	68.31
	18.40	4.80	76.80	
	62.16	50.00	71.64	
TOTAL	37	12	134	183
	20.22	6.56	73.22	100.00

CHI-SQUARE	3.615	DF= 4	PROB=0.4606
PHI	0.141		
CONTINGENCY COEFFICIENT	0.139		
CRAMER'S V	0.099		
LIKELIHOOD RATIO CHISQUARE	3.369	DF= 4	PROB=0.4961

GROUPS 1-5

TABLE OF N11 BY N6

N11 BELT/BP N6 SMOKING

FREQUENCY PERCENT ROW PCT COL PCT	HIGH	MEDIUM	LOW	TOTAL
HIGH	1 0.55 2.33 7.14	3 1.64 6.98 50.00	39 21.31 90.70 23.93	43 23.50
MEDIUM	4 2.19 26.67 28.57	1 0.55 6.67 16.67	10 5.46 66.67 6.13	15 8.20
LOW	9 4.92 7.20 64.29	2 1.09 1.60 33.33	114 62.30 91.20 69.94	125 68.31
TOTAL	14 7.65	6 3.28	163 89.07	183 100.00

CHI-SQUARE	13.032	DF= 4	PROB=0.0111
PHI	0.267		
CONTINGENCY COEFFICIENT	0.258		
CRAMER'S V	0.189		
LIKELIHOOD RATIO CHISQUARE	10.599	DF= 4	PROB=0.0315

GROUPS 1-5

TABLE OF N16 BY RACE

N16 ACCIDENT/STR RACE

FREQUENCY PERCENT ROW PCT COL PCT	A	W	TOTAL
HIGH	7 3.83 6.86 33.33	95 51.91 93.14 58.64	102 55.74
MEDIUM	0 0.00 0.00 0.00	7 3.83 100.00 4.32	7 3.83
LOW	14 7.65 18.92 66.67	60 32.79 81.08 37.04	74 40.44
TOTAL	21 11.48	162 88.52	183 100.00

CHI-SQUARE	7.680	DF= 2	PROB=0.0290
PHI	0.197		
CONTINGENCY COEFFICIENT	0.193		
CRAMER'S V	0.197		
LIKELIHOOD RATIO CHISQUARE	7.619	DF= 2	PROB=0.0222

GROUPS 1-5

TABLE OF N16 BY SEX

N16 ACCIDENT/STR SEX

FREQUENCY / PERCENT / ROW PCT / COL PCT	F	M	TOTAL
HIGH	81	21	102
	44.26	11.48	55.74
	79.41	20.59	
	57.86	48.84	
MEDIUM	2	5	7
	1.09	2.73	3.83
	28.57	71.43	
	1.43	11.63	
LOW	57	17	74
	31.15	9.29	40.44
	77.03	22.97	
	40.71	39.53	
TOTAL	140	43	183
	76.50	23.50	100.00

CHI-SQUARE	9.438	DF= 2	PROB=0.0089
PHI	0.227		
CONTINGENCY COEFFICIENT	0.221		
CRAMER'S V	0.227		
LIKELIHOOD RATIO CHISQUARE	7.685	DF= 2	PROB=0.0214

GROUPS 1-5

TABLE OF N16 BY AGE

N16 ACCIDENT/STR AGE

FREQUENCY / PERCENT / ROW PCT / COL PCT	18-25	26-35	36+	TOTAL
HIGH	24	41	37	102
	13.11	22.40	20.22	55.74
	23.53	40.20	36.27	
	48.00	56.94	60.66	
MEDIUM	0	5	2	7
	0.00	2.73	1.09	3.83
	0.00	71.43	28.57	
	0.00	6.94	3.28	
LOW	26	26	22	74
	14.21	14.21	12.02	40.44
	35.14	35.14	29.73	
	52.00	36.11	36.07	
TOTAL	50	72	61	183
	27.32	39.34	33.33	100.00

CHI-SQUARE	6.687	DF= 4	PROB=0.1420
PHI	0.194		
CONTINGENCY COEFFICIENT	0.190		
CRAMER'S V	0.137		
LIKELIHOOD RATIO CHISQUARE	8.347	DF= 4	PROB=0.0797

GROUPS 1-5

TABLE OF N16 BY R

N16 ACCIDENT/STR R

FREQUENCY / PERCENT / ROW PCT / COL PCT	HIGH	MEDIUM	LOW	TOTAL
HIGH	11	13	78	102
	6.01	7.10	42.62	55.74
	10.78	12.75	76.47	
	39.29	65.00	57.78	
MEDIUM	1	0	6	7
	0.55	0.00	3.28	3.83
	14.29	0.00	85.71	
	3.57	0.00	4.44	
LOW	16	7	51	74
	8.74	3.83	27.87	40.44
	21.62	9.46	68.92	
	57.14	35.00	37.78	
TOTAL	28	20	135	183
	15.30	10.93	73.77	100.00

CHI-SQUARE	4.988	DF= 4	PROB=0.2885
PHI	0.165		
CONTINGENCY COEFFICIENT	0.163		
CRAMER'S V	0.117		
LIKELIHOOD RATIO CHISQUARE	5.078	DF= 4	PROB=0.2245

GROUPS 1-5

TABLE OF N16 BY N2

N16 ACCIDENT/STR N2 CHECKUP

FREQUENCY PERCENT ROW PCT COL PCT	HIGH	MEDIUM	LOW	TOTAL
HIGH	10 5.46 9.80 27.03	4 2.19 3.92 33.33	88 48.09 86.27 65.67	102 55.74
MEDIUM	3 1.64 42.86 8.11	0 0.00 0.00 0.00	4 2.19 57.14 2.99	7 3.83
LOW	24 13.11 32.43 64.86	8 4.37 10.81 66.67	42 22.95 56.76 31.34	74 40.44
TOTAL	37 20.22	12 6.56	134 73.22	183 100.00

CHI-SQUARE	21.648	DF= 4	PROB=0.0002
PHI	0.344		
CONTINGENCY COEFFICIENT	0.325		
CRAMER'S V	0.243		
LIKELIHOOD RATIO CHISQUARE	22.084	DF= 4	PROB=0.0002

GROUPS 1-5

TABLE OF N16 BY N6

N16 ACCIDENT/STR No SMOKING

FREQUENCY / PERCENT / ROW PCT / COL PCT	HIGH	MEDIUM	LOW	TOTAL
HIGH	7	3	92	102
	3.83	1.64	50.27	55.74
	6.86	2.94	90.20	
	50.00	50.00	56.44	
MEDIUM	0	0	7	7
	0.00	0.00	3.83	3.83
	0.00	0.00	100.00	
	0.00	0.00	4.29	
LOW	7	3	64	74
	3.83	1.64	34.97	40.44
	9.46	4.05	86.49	
	50.00	50.00	39.26	
TOTAL	14	6	163	183
	7.65	3.28	89.07	100.00

CHI-SQUARE	1.499	DF= 4	PROB=0.8268
PHI	0.091		
CONTINGENCY COEFFICIENT	0.090		
CRAMER'S V	0.064		
LIKELIHOOD RATIO CHISQUARE	2.234	DF= 4	PROB=0.6929

REFERENCES

Ashton, S. J., Mackay, G. M., and Camm, S. Seat belt use in Britain under voluntary and mandatory conditions. 27th Proceedings American Association for Automotive Medicine, Arlington Heights, IL, 1983.

Schwalm, Norman D. and Slovic, Paul. Risk Perception and Seat Belt Use: Report on Phase II: Experimental Test of Animatic Equivalent Seat Belt Messages, US DOT, NHTSA, 1983.

Slovic, Paul, Lichtenstein, Sarah, MacGregor, Don, Fischhoff, Baruch, and Schwalm, Norman. Risk Perception and Seat-Belt Use: Report on Phase I: Development and Test of Printed Seat-Belt Messages, US DOT, NHTSA, 1983.

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